

UTILITY SOURCE
(PROVIDED BY OTHERS)
480V 3φ WYE

XR BATTERY FRAME-1
[SYBFXR8+ (48)SYBTU2-PLP]

XR BATTERY FRAME-2
[SYBFXR8+ (48)SYBTU2-PLP]

UPS POWER FRAME
[SYPF250KD+ (10)SYPM25KD]

UPS I/O FRAME
[SYIOF500KMBL/R)+(SYSW250KD)

MAINTENANCE BYPASS FRAME WITH DISTRIBUTION, MBwD

| 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 UTILITY SOURCE SHALL BE 480VAC, 3φ, 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 INSTALLED FOR SINGLE MAINS INSTALLATION. FOR DUAL 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.
- CABLE LUGS ARE NOT PROVIDED.
- 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.
- 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.

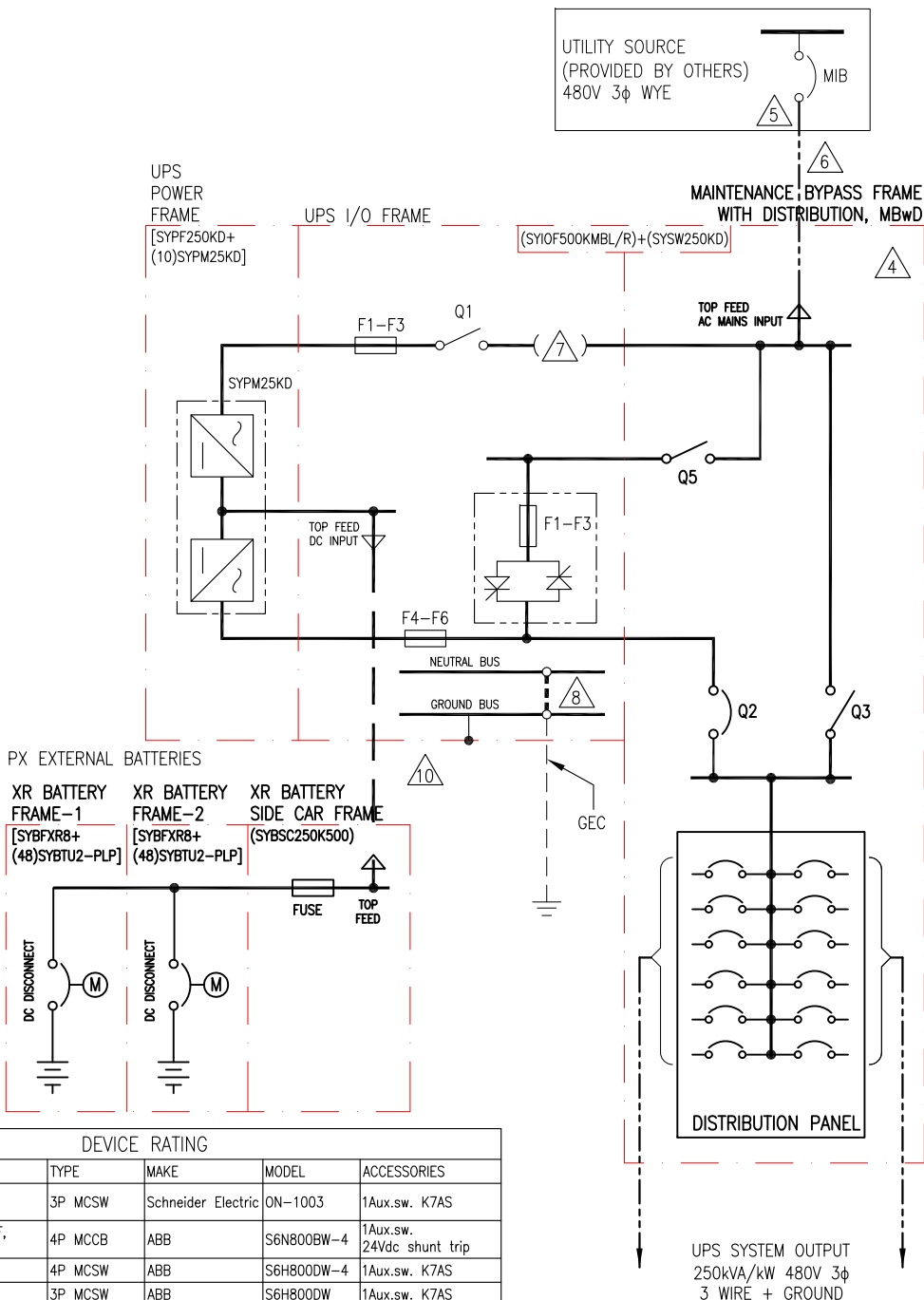
| DEVICE RATING | | | | | |
|------------------------------|-------------------|-----------------|--------------------|------------|---|
| DEVICE | RATING | TYPE | MAKE | MODEL | ACCESSORIES |
| Q1 | 1000A, 600V | 3P MCSW | Schneider Electric | ON-1003 | 1Aux.sw. K7AS |
| Q2 | 800AT/800AF, 600V | 4P 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 | 630A, 700V | HIGH SPEED FUSE | BUSSMANN | 170M5162 | -- |
| DC DISCONNECT | 400A, 600V DC | 4P MCSW | ABB | T5 | 1Aux.contact, 24VDC, Shunt trip, Actuator |

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3 WIRE OUTPUT CONFIGURATION, SINGLE MAINS

| | | |
|--|------------------------------|----------------------|
| TITLE: SYMMETRA PX INPUT: 480V WYE 3φ, SINGLE MAINS OUTPUT: 480V 250kVA/kW TOP FEED WITH LINE-UP BATTERIES SYSTEM ONE LINE DIAGRAM | DWG NO: SY250K250TG1C1-3W-SD | REV. 8 |
| PROJECT: SUBMITTAL DRAWINGS | SHEET 1 OF 3 | APPROVED: B SHERIDAN |
| | | 03-JUL-15 |
| | | 03-JUL-15 |
| | | PROJ ANGLE N.A. |



| 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 UTILITY SOURCE SHALL BE 480VAC, 3φ, 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 INSTALLED FOR SINGLE MAINS INSTALLATION. FOR DUAL 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.
 - 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.
 - DC CABLING SHALL BE 1000V RATED, 3-WIRE +GROUND. SEE SHEET 3 FOR ADDITIONAL DATA.
 - 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.
 - 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.
 - 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 | 630A, 700V | HIGH SPEED FUSE | BUSSMANN | 170M5162 | -- |
| 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 | -- |

3 WIRE OUTPUT CONFIGURATION, SINGLE MAINS

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| | | |
|--|-------------------------------------|-----------------------------|
| TITLE: SYMMETRA PX INPUT: 480V WYE 3φ, SINGLE MAINS OUTPUT: 480V 250kVA/kW TOP FEED WITH EXTERNAL BATTERIES SYSTEM ONE LINE DIAGRAM | DWG NO: SY250K250TG1C1-3W-SD | REV: 8 |
| PROJECT: SUBMITTAL DRAWINGS | SHEET 2 OF 3 | APPROVED: B SHERIDAN |
| DRAWN: BUSH/S CUNHA/BALA | 03-JUL-15 | PROJ ANGLE: |
| ENGINEER: C FLY/A WARNER | 03-JUL-15 | N.A.: |

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

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

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 Mains Input 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. 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).
5. Electronic Input Current Limit
6. 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.
7. For maximum scalability or future expansion it is recommended that the UPS frames be installed at their full ratings - see bold highlighted data
8. All OCPD's and cabling are by others.
9. OCPD = Over Current Protective Device
10. 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 WYE 3Ø, SINGLE MAINS
OUTPUT: 480V 250kVA/KW
SITE PLANNING SUBMITTAL DATA

PROJECT: SUBMITTAL DRAWINGS | SHEET 3 OF 3

DWG NO: SY250K250TG1C1-3W-SD

| | |
|----------------------|-----------|
| DRAWN: BALAMURUGAN | 03-JUL-15 |
| ENGINEER: A WARNER | 03-JUL-15 |
| APPROVED: B SHERIDAN | 03-JUL-15 |

REV. 6

PROJ ANGLE N.A.