

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 50kAIC.
  - AC UTILITY SOURCE SHALL BE 480VAC 3φ WYE, 3 WIRE+GROUND (CONTACT APC by 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 APC by Schneider Electric FOR RELATED SUBMITTAL DRAWINGS.
  - THE NEUTRAL TO GROUND SYSTEM BONDING JUMPER PROVIDED BY APC 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 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.
  - 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 MCB	APC by 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 MCB	ABB	S6H800DW-4	1Aux.sw. K7AS
Q5	800A, 600V	3P MCB	ABB	S6H800DW	1Aux.sw. K7AS
DC DISCONNECT	400A, 600V DC	4P MCB	ABB	T5	1Aux.contact, 24VDC, Shunt trip, Actuator

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TITLE: SYMMETRA PX  
 INPUT: 480V WYE 3φ SINGLE MAINS  
 OUTPUT: 480V 500kVA/kW  
 TOP FEED WITH LINE-UP BATTERIES  
 SYSTEM ONE LINE DIAGRAM

DWG NO: SY500K500BG1C1-3W-SD REV. 5

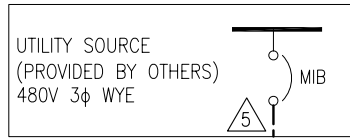
DRAWN: V BUSH 23-MAR-11  
 ENGINEER: A WARNER 23-MAR-11  
 APPROVED: M DESHPANDE/B SHERIDAN 23-MAR-11

PROJECT: SUBMITTAL DRAWINGS SHEET 1 OF 3

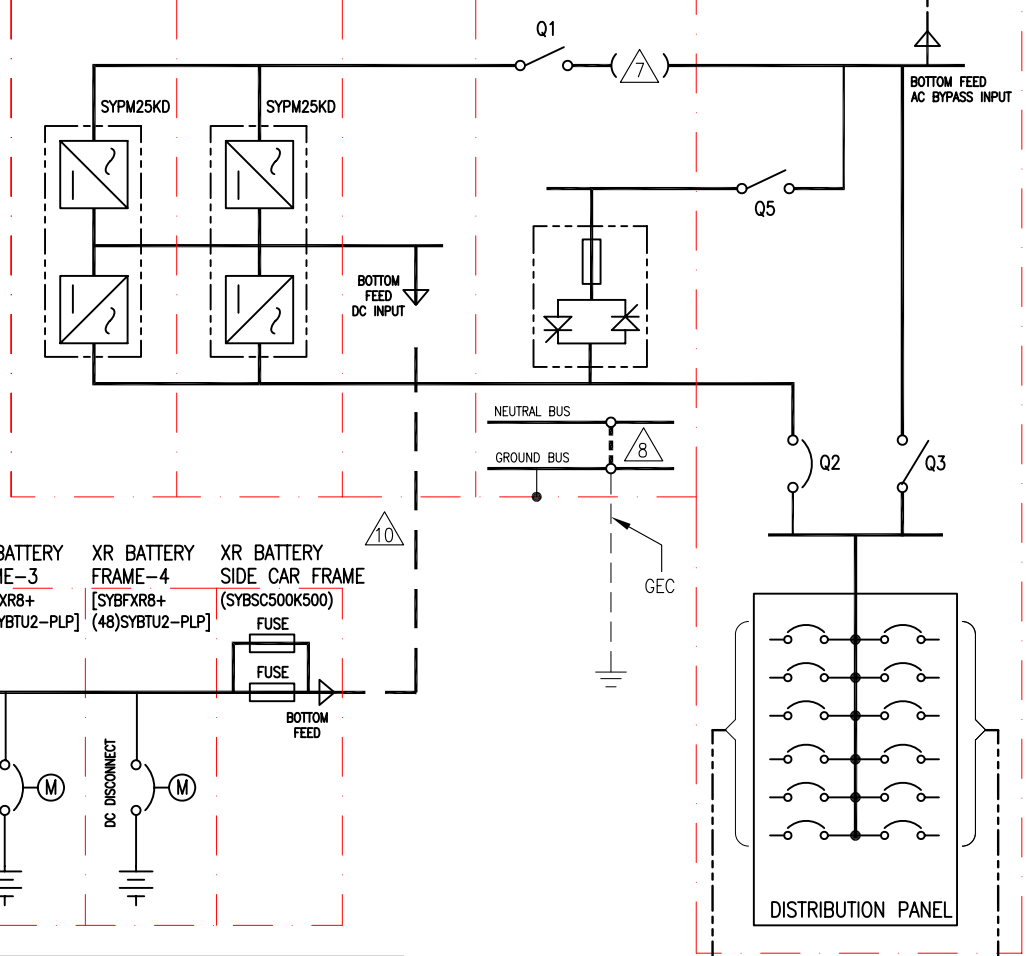
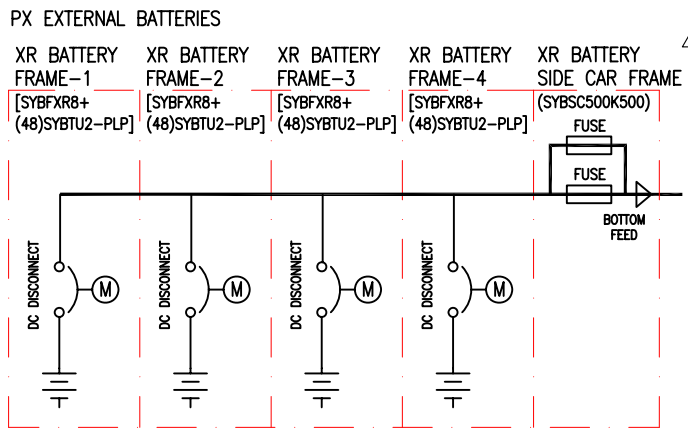
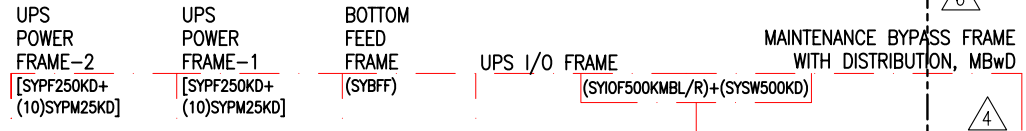
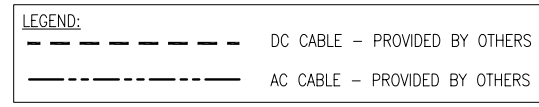
PROJ ANGLE N.A.

3 WIRE OUTPUT CONFIGURATION, SINGLE MAINS

UPS SYSTEM OUTPUT  
 500kVA/kW 480V 3φ  
 3 WIRE + GROUND



DISTRIBUTION PANEL OPTIONS			
OPTION REFERENCE	BREAKER FRAME RATING	MAX. QTY 3P	SHORT CIRCUIT CURRENT RATING
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T5	400A	SEE NOTE-11	25kAIC



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  - 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 50KAIC.
  - AC UTILITY SOURCE SHALL BE 480VAC 3φ WYE, 3 WIRE+GROUND (CONTACT APC by 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 APC by Schneider Electric FOR RELATED SUBMITTAL DRAWINGS.
  - THE NEUTRAL TO GROUND SYSTEM BONDING JUMPER PROVIDED BY APC 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 600V 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.

UPS SYSTEM OUTPUT  
500kVA/kW 480V 3φ  
3 WIRE + GROUND

3 WIRE OUTPUT CONFIGURATION, SINGLE MAINS

DEVICE RATING					
DEVICE	RATING	TYPE	MAKE	MODEL	ACCESSORIES
Q1	1000A, 600V	3P MCSW	APC by 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
DC DISCONNECT	400A, 600V DC	4P MCSW	ABB	T5	1Aux.contact, 24VDC, Shunt trip, Actuator
FUSES	500A 500V DC	CLASS J	FERRAZ SHAWMUT	AJT500EI	--

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TITLE: SYMMETRA PX INPUT: 480V WYE 3φ, SINGLE MAINS OUTPUT: 480V 500kVA/kW BOTTOM FEED WITH EXTERNAL BATTERIES SYSTEM ONE LINE DIAGRAM	DWG NO: SY500K500BG1C1-3W-SD	REV. 5
PROJECT: SUBMITTAL DRAWINGS	SHEET 2 OF 3	APPROVED: M DESHPANDE/B SHERIDAN
DRAWN: V BUSH	23-MAR-11	PROJ ANGLE
ENGINEER: A WARNER	23-MAR-11	N.A.

# APC Symmetra® PX 250K and 500K UPS Frame Submittal Data - Single Feed with MBwD

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

## APC Symmetra® PX

Notes.

1. Mains Input source must be 480V Wye 3-wire + Ground or 4-wire +Ground.. Contact APC 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. See applicable submittal drawings for additional details.
5. For precise mechanical data on your planned system configuration contact APC.
6. Contact APC for assistance with all external battery designs. Maximum allowed DC cabling voltage drop is 1 VDC.  
APC Standard external DCD's are rated 500A (PX 250kVA) & 1000A (PX 500kVA).
7. Electronic Input Current Limit
8. This is the UPS short time rating of 125% Overload for 10 minutes. Actual short time performance may be limited by the over current protective device selected.
9. For maximum scalability or future expansion it is recommended that the UPS frames be installed at their full ratings - see bold highlighted data
10. All OCPD's and cabling are by others.
11. OCPD = Over Current Protective Device
12. Not applicable, maximum input OCPD rating is 800A for Single Feed with MBwD.

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

PROJECT: SUBMITTAL DRAWINGS | SHEET 3 OF 3

DWG NO: SY500K500BG1C1-3W-SD

DRAWN: BALAMURUGAN 20-JUN-11

ENGINEER: A WARNER 20-JUN-11

APPROVED: M DESHPANDE/B SHERIDAN 20-JUN-11

REV. 5

PROJ ANGLE

N.A.