

**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 ( $I_{cw}$ ) IS 50kA.
- 3x400/230V TN-S (PROVIDED BY OTHERS). FOR OTHER EARTHING PRINCIPLES, PLEASE CONTACT APC by Schneider Electric. RECOMMENDED UPSTREAM PROTECTION IS A MINIMUM RATING TO SUPPORT MAXIMUM CURRENT, WITHOUT SELECTIVITY. SEE SHEET-3 FOR InfrastruXure PLANNING GUIDE.
- FOR TN-SYSTEMS, PLEASE PROVIDE A SUITABLE EARTH ELECTRODE ACCORDING TO IEC/EN60364-5-55, 551.4.2 TO MAINTAIN THE UPS INVERTER REFERENCE. MUST BE CONNECTED TO THE GROUNDING ELECTRODE TERMINAL-E.
- ALL AC POWER CABLING IS L1, L2, L3, N, PE.
- SINGLE MAINS IS FACTORY DEFAULT CONFIGURATION. THE I/O FRAME TO MBwD FRAME BUS BAR LINKS MUST BE REMOVED FOR DUAL MAINS INSTALLATION.
- 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.

**LEGEND:**

--- AC CABLE - PROVIDED BY OTHERS

DISTRIBUTION PANEL OPTIONS			
OPTION REFERENCE	BREAKER FRAME RATING	MAX. QTY 3POLE	SHORT CIRCUIT CURRENT RATING $I_{cw}$
T1	100A	16	22kA
T3	225A	12	25kA
T5	400A	SEE NOTE-11	25kA

DEVICE RATING					
DEVICE	RATING	TYPE	MAKE	MODEL	ACCESSORIES
Q1	1000A, 600V	3P, MCSW	SCHNEIDER ELECTRIC	0N-1003	1 AUX. SW. K7AS
Q2	800A/1/800AF, 600V	4P MCCB	ABB	S6N800BW-4	1AUX. SW, 24V DCSHUNT TRIP
Q3	800A, 600V	4P MCSW	ABB	S6H800DW-4	1 AUX. SW. K7AS
Q5	800A, 600V	3P MCSW	ABB	S6H800DW	1 AUX. SW. K7AS
INVERTER FUSES F1-F3/F4-F6	1250A, 690V	HIGH SPEED FUSE	BUSSMANN	170M6466	--
SSW FUSES F1-F3	1100A, 690V	HIGH SPEED FUSE	BUSSMANN	170M5167	--
DC DISCONNECT	400A, 600V DC	4P MCSW	ABB	T5	1 AUX. CONTACT, 24VDC SHUNT TRIP, ACTUATOR

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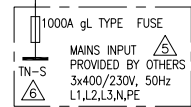
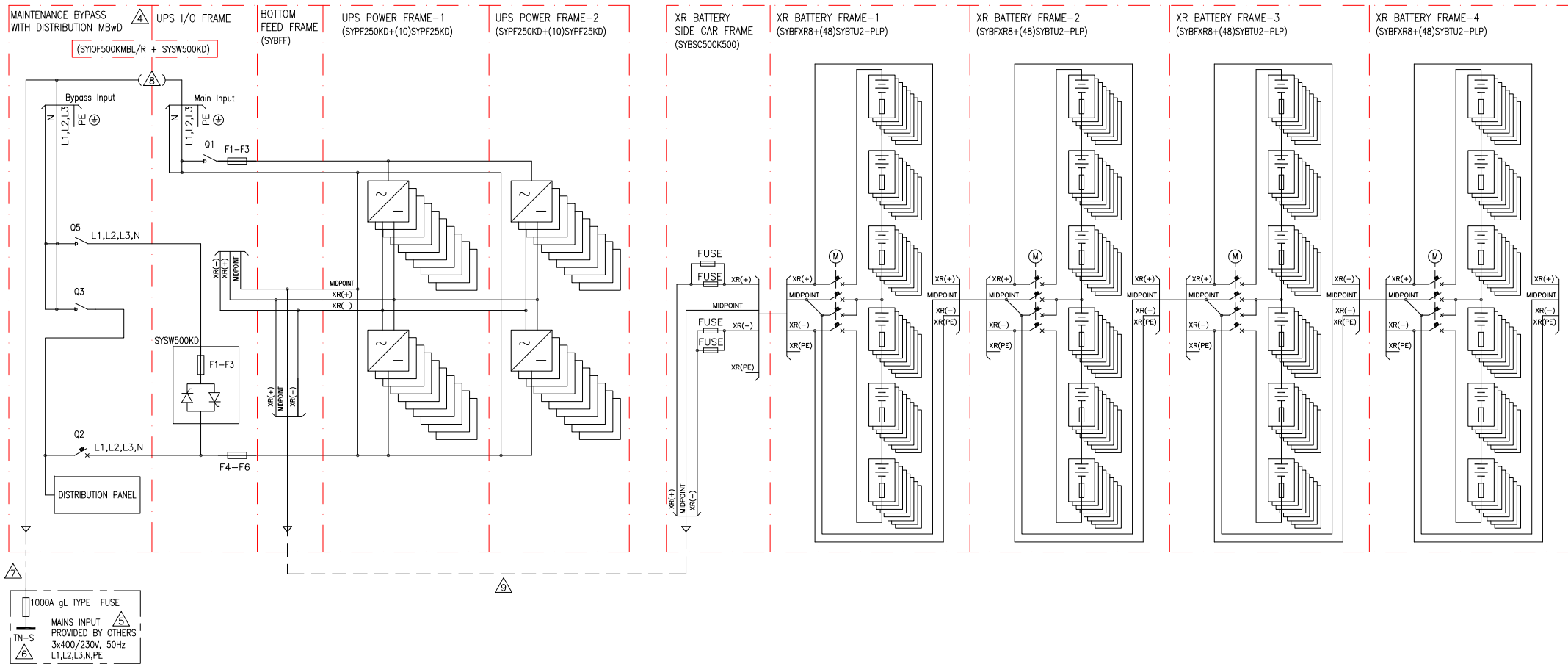
**TITLE:** SYMMETRA PX  
 Input: 400/230V AC 3PH SINGLE MAINS  
 Output: 400/230V AC AND 400V AC 3PH 500KW  
 BOTTOM FEED WITH LINE-UP BATTERIES  
 SYSTEM ONE LINE DIAGRAM

**PROJECT:** SUBMITTAL DRAWINGS **SHEET 1 OF 3**

**DWG NO:** SY500K500BH1C1-SD

**DRAWN:** BALAMURUGAN 11-NOV-14  
**ENGINEER:** S.ANDERSEN 15-DEC-14  
**APPROVED:** F.DIOSA/S.WAGH 15-DEC-14

**REV:** 2  
**ANGLE PROJECTION:** N/A



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  3. DRAWING DEPICTS POWER SYSTEM CONNECTIONS AND IS NOT REPRESENTATIVE OF PHYSICAL LAYOUT, PLEASE REFER TO MECHANICAL DRAWINGS FOR PHYSICAL LAYOUT.
  4. MAXIMUM RATED SHORT CIRCUIT CURRENT ( $I_{cw}$ ) IS 50kA.
  5. 3x400/230V TN-S (PROVIDED BY OTHERS). FOR OTHER EARTHING PRINCIPLES, PLEASE CONTACT APC by Schneider Electric. RECOMMENDED UPSTREAM PROTECTION IS A MINIMUM RATING TO SUPPORT MAXIMUM CURRENT, WITHOUT SELECTIVITY. SEE SHEET-3 FOR InfrastruXure PLANNING GUIDE.
  6. FOR TN-SYSTEMS, PLEASE PROVIDE A SUITABLE EARTH ELECTRODE ACCORDING TO IEC/EN60364-5-55, 551.4.2 TO MAINTAIN THE UPS INVERTER REFERENCE. MUST BE CONNECTED TO THE GROUNDING ELECTRODE TERMINAL-E.
  7. ALL AC POWER CABLING IS L1, L2, L3, N, PE.
  8. SINGLE MAINS IS FACTORY DEFAULT CONFIGURATION. THE I/O FRAME TO MBwD FRAME BUS LINKS MUST BE REMOVED FOR DUAL MAINS INSTALLATION.
  9. DC CABLING SHALL BE 600V RATED, 3-WIRE +PE. SEE SHEET 3 FOR ADDITIONAL DATA.
  10. CABLE LUGS ARE NOT PROVIDED.
  11. 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.
  12. 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.

**LEGEND:**

---	DC CABLE - PROVIDED BY OTHERS
---	AC CABLE - PROVIDED BY OTHERS

**DISTRIBUTION PANEL OPTIONS**

OPTION REFERENCE	BREAKER FRAME RATING	MAX. QTY 3POLE	SHORT CIRCUIT CURRENT RATING $I_{cw}$
T1	100A	16	22kA
T3	225A	12	25kA
T5	400A	SEE NOTE-11	25kA

**DEVICE RATING**

DEVICE	RATING	TYPE	MAKE	MODEL	ACCESSORIES
Q1	1000A, 600V	3P, MCSW	SCHNEIDER ELECTRIC	ON-1003	1 AUX. SW. K7AS
Q2	800AT/800AF, 600V	4P MCCB	ABB	S6N800BW-4	1AUX. SW, 24V DC SHUNT TRIP
Q3	800A, 600V	4P MCSW	ABB	S6H800DW-4	1 AUX. SW. K7AS
Q5	800A, 600V	3P MCSW	ABB	S6H800DW	1 AUX. SW. K7AS
INVERTER FUSES F1-F3/F4-F6	1250A, 690V	HIGH SPEED FUSE	BUSSMANN	170M6466	--
SSW FUSES F1-F3	1100A, 690V	HIGH SPEED FUSE	BUSSMANN	170M5167	--
DC DISCONNECT	400A, 600V DC	4P MCSW	ABB	T5	1 AUX. CONTACT, 24VDC SHUNT TRIP, ACTUATOR
FUSE	500A, 500V DC	CLASS J	FERRAZ SHAWMUT	AJT500EI	--

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**TITLE:** SYMMETRA PX  
 Input: 400/230V AC 3PH SINGLE MAINS  
 Output: 400/230V AC AND 400V AC 3PH 500KW  
 BOTTOM FEED WITH EXTERNAL BATTERIES  
 SYSTEM ONE LINE DIAGRAM

**DWG NO:** SY500K500BH1C1-SD  
**REV:** 3  
**DRAWN:** BALAMURUGAN 11-NOV-14  
**ENGINEER:** S.ANDERSEN 15-DEC-14  
**APPROVED:** F.DIOSA/S.WAGH 15-DEC-14  
**ANGLE PROJECTION:** N/A

## InfrastruXure Planning Guide Symmetra PX 250/500 (400V)

UPS frame	UPS rating kVA / kW			AC Input (400V)						Battery System			AC Output (400V)		Maintenance bypass breaker rating. Single or dual mains		
	QTY power module 25kW	[P] kW nom	pf	[P] kW nom	[P] kW max.	Utility source		Current I [A]		*Q1 Protection Breaker [A]	Vn nominal [VDC]	Full load P [kW]	Imax DC Discharge [A]	In [A]	*Q2 Protection Breaker [A]	*Q3	**Q5
						Hz	[V]	Nominal	Max.								
250kVA / 250kW 1 x 250k frame	4	100	1	104	115	50	400	151	166	160	2 x 288	104	226	144	160	160	160
	5	125	1	130	143	50	400	189	208	250	2 x 288	130	283	180	225	225	225
	6	150	1	156	172	50	400	227	249	250	2 x 288	156	339	217	225	225	225
	7	175	1	182	201	50	400	264	291	400	2 x 288	182	396	253	400	400	400
	8	200	1	208	229	50	400	302	332	400	2 x 288	208	452	289	400	400	400
	9	225	1	234	258	50	400	340	374	400	2 x 288	234	509	325	400	400	400
	10	250	1	260	286	50	400	378	416	630 ***400	2 x 288	260	565	361	400	400	400
500kVA / 500kW 2 x 250k Frame	11	275	1	286	315	50	400	416	457	630	2 x 288	286	622	397	400	400	400
	12	300	1	313	344	50	400	453	499	630	2 x 288	312	678	433	630	630	630
	13	325	1	339	372	50	400	491	540	630	2 x 288	338	735	469	630	630	630
	14	350	1	365	401	50	400	529	582	630	2 x 288	364	791	505	630	630	630
	15	375	1	391	430	50	400	567	623	630	2 x 288	390	848	541	630	630	630
	16	400	1	417	458	50	400	605	665	800	2 x 288	416	904	577	630	630	630
	17	425	1	443	487	50	400	642	707	800	2 x 288	442	961	613	630	630	630
	18	450	1	469	516	50	400	680	748	800	2 x 288	468	1017	650	800	800	800
	19	475	1	495	544	50	400	718	790	800	2 x 288	494	1074	686	800	800	800
	20	500	1	521	573	50	400	756	831	1000 ***800	2 x 288	520	1130	722	800	800	800

- The Symmetra PX3 250/500 is not configured with less than 5 power modules rated at 100kVA N+1 internal redundancy or 125kVA full load N
- The standard bypass sidecar MBwD is as standard rated for 500kW
- If 3rd party maintenance bypass is used, communications board will be necessary
- For breaker ratings overload has not been considered
- Values given for stand alone unit.
- \* Q1,Q2, Q3 and,Q5 recommended for 3rd party maintenance bypass
- \*\* Used for 3rd party bypass with dual mains
- \*\*\* Breaker must comply with IEC 60947-2 which guarantee a non-tripping current of 1,05 times current setting for 2 hours. Alternative breaker size must be higher than stated current

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**Schneider Electric**

TITLE: SYMMETRA PX  
Input: 400/230V AC 3PH SINGLE MAINS  
Output: 400/230V AC AND 400V AC 3PH 500kW  
InfrastruXure PLANNING GUIDE

DWG NO: SY500K500BH1C1-SD

REV. 2

DRAWN: BALAMURUGAN 13-NOV-14

ENGINEER: S.ANDERSEN 15-DEC-14

APPROVED: F.DIOSA/S.WAGH 15-DEC-14

PROJECT: SUBMITTAL DRAWINGS SHEET 3 OF 3

ANGLE PROJECTION: N/A