

Symmetra™ PX

250/500 kW 400/480 V

Technical Specifications

2/2019



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As standards, specifications, and designs change from time to time, please ask for confirmation of the information given in this publication.

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Important Safety Instructions — SAVE THESE INSTRUCTIONS

Read these instructions carefully and look at the equipment to become familiar with it before trying to install, operate, service or maintain it. The following safety messages may appear throughout this manual or on the equipment to warn of potential hazards or to call attention to information that clarifies or simplifies a procedure.



The addition of this symbol to a “Danger” or “Warning” safety message indicates that an electrical hazard exists which will result in personal injury if the instructions are not followed.



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages with this symbol to avoid possible injury or death.

DANGER

DANGER indicates a hazardous situation which, if not avoided, **will result in death or serious injury.**

Failure to follow these instructions will result in death or serious injury.

WARNING

WARNING indicates a hazardous situation which, if not avoided, **could result in death or serious injury.**

Failure to follow these instructions can result in death, serious injury, or equipment damage.

CAUTION

CAUTION indicates a hazardous situation which, if not avoided, **could result in minor or moderate injury.**

Failure to follow these instructions can result in injury or equipment damage.

NOTICE

NOTICE is used to address practices not related to physical injury. The safety alert symbol shall not be used with this type of safety message.

Failure to follow these instructions can result in equipment damage.

Please Note

Electrical equipment should only be installed, operated, serviced, and maintained by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material.

A qualified person is one who has skills and knowledge related to the construction, installation, and operation of electrical equipment and has received safety training to recognize and avoid the hazards involved.

Safety Precautions

⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- The product must be installed according to the specifications and requirements as defined by Schneider Electric. It concerns in particular the external and internal protections (upstream circuit breakers, battery circuit breakers, cabling, etc.) and environmental requirements. No responsibility is assumed by Schneider Electric if these requirements are not respected.
- After the UPS system has been electrically wired, do not start up the system. Start-up must only be performed by Schneider Electric.

Failure to follow these instructions will result in death or serious injury.

⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

The UPS System must be installed according to local and national regulations. Install the UPS according to:

- IEC 60364 (including 60364-4-41- protection against electric shock, 60364-4-42 - protection against thermal effect, and 60364-4-43 - protection against overcurrent), **or**
- NEC NFPA 70

depending on which one of the standards apply in your local area.

Failure to follow these instructions will result in death or serious injury.

⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Install the UPS system in a temperature controlled area free of conductive contaminants and humidity.
- Install the UPS system on a non-flammable, level, and solid surface (e.g. concrete) that can support the weight of the system.

Failure to follow these instructions will result in death or serious injury.

⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

The UPS is not designed for and must therefore not be installed in the following unusual operating environments:

- Damaging fumes
- Explosive mixtures of dust or gases, corrosive gases, or conductive or radiant heat from other sources
- Moisture, abrasive dust, steam or in an excessively damp environment
- Fungus, insects, vermin
- Salt-laden air or contaminated cooling refrigerant
- Pollution degree higher than 2 according to IEC 60664-1
- Exposure to abnormal vibrations, shocks, and tilting
- Exposure to direct sunlight, heat sources, or strong electromagnetic fields

Failure to follow these instructions will result in death or serious injury.

NOTICE

RISK OF OVERHEATING

Respect the clearance requirements around the UPS system and do not cover the product's ventilation openings when the UPS system is in operation.

Failure to follow these instructions can result in equipment damage.

NOTICE

RISK OF EQUIPMENT DAMAGE

Do not connect the UPS output to regenerative load systems including photovoltaic systems and speed drives.

Failure to follow these instructions can result in equipment damage.

Technical Data

Model List

Systems with Maintenance Bypass and Distribution

Part Number	Description
SY100K250DR-PD	100 kW scalable to 250 kW with right mounted maintenance bypass and distribution
SY125K250DL-PD	125 kW scalable to 250 kW with left mounted maintenance bypass and distribution
SY125K250DR-PD	125 kW scalable to 250 kW with right mounted maintenance bypass and distribution
SY125K250DR-PDNB	125 kW scalable to 250 kW with right mounted maintenance bypass and distribution, No Batteries
SY125K500DR-PD	125 kW scalable to 500 kW with right mounted maintenance bypass and distribution
SY125K500DR-PDNB	125 kW scalable to 500 kW with Maintenance Bypass and Distribution, No Batteries
SY150K250DR-PD	150 kW scalable to 250 kW with right mounted maintenance bypass and distribution
SY200K250DR-PD	200 kW scalable to 250 kW with right mounted maintenance bypass and distribution
SY250K500DL-PD	250 kW scalable to 500 kW with left mounted maintenance bypass and distribution
SY250K500DR-PD	250 kW scalable to 500 kW with right mounted maintenance bypass and distribution
SY300K500DR-PD	300 kW scalable to 500 kW with right mounted maintenance bypass and distribution
SY400K500DR-PD	400 kW scalable to 500 kW with right mounted maintenance bypass and distribution
SY500K500DL-PD	500 kW scalable to 500 kW with left mounted maintenance bypass and distribution
SY500K500DR-PD	500 kW scalable to 500 kW with right mounted maintenance bypass and distribution

Systems without Maintenance Bypass and Distribution

Part Number	Description
SY100K250D	100 kW scalable to 250 kW without maintenance bypass and distribution - parallel capable
SY125K250D	125 kW scalable to 250 kW without maintenance bypass and distribution - parallel capable
SY125K250D-NB	125 kW scalable to 250 kW without maintenance bypass, distribution and batteries - parallel capable
SY125K500D	125 kW scalable to 500 kW without maintenance bypass and distribution - parallel capable
SY125K500D-NB	125 kW scalable to 500 kW without maintenance bypass, distribution and batteries - parallel capable
SY150K250D	150 kW scalable to 250 kW without maintenance bypass and distribution - parallel capable
SY200K250D	200 kW scalable to 250 kW without maintenance bypass and distribution - parallel capable
SY250K500D	250 kW scalable to 500 kW without maintenance bypass and distribution - parallel capable
SY300K500D	300 kW scalable to 500 kW without maintenance bypass and distribution - parallel capable
SY400K500D	400 kW scalable to 500 kW without maintenance bypass and distribution - parallel capable
SY500K500D	500 kW scalable to 500 kW without maintenance bypass and distribution - parallel capable

Efficiency (TÜV Certified)

480 V Systems

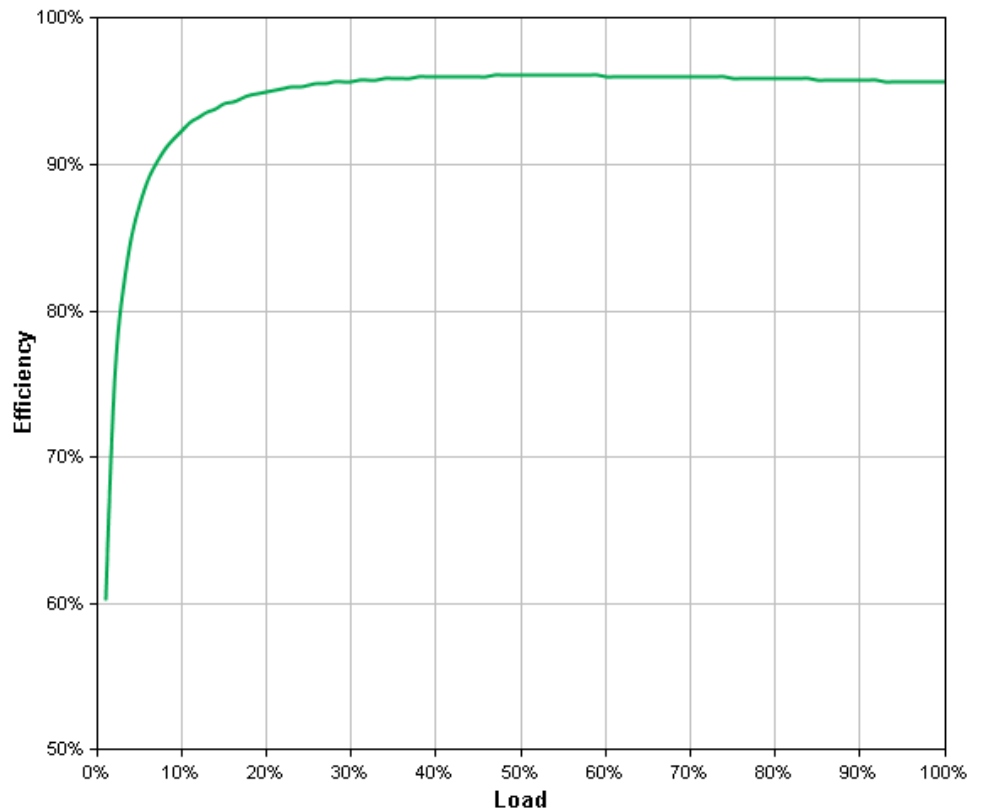
System	25% load	50% load	75% load	100% load
250 kW	95.2	96.2	96.3	96.3
500 kW	95.5	96.3	96.4	96.3

400/415 V Systems

System	25% load	50% load	75% load	100% load
250 kW	95.5	96.1	96.0	95.7
500 kW	95.5	96.1	96.0	95.6

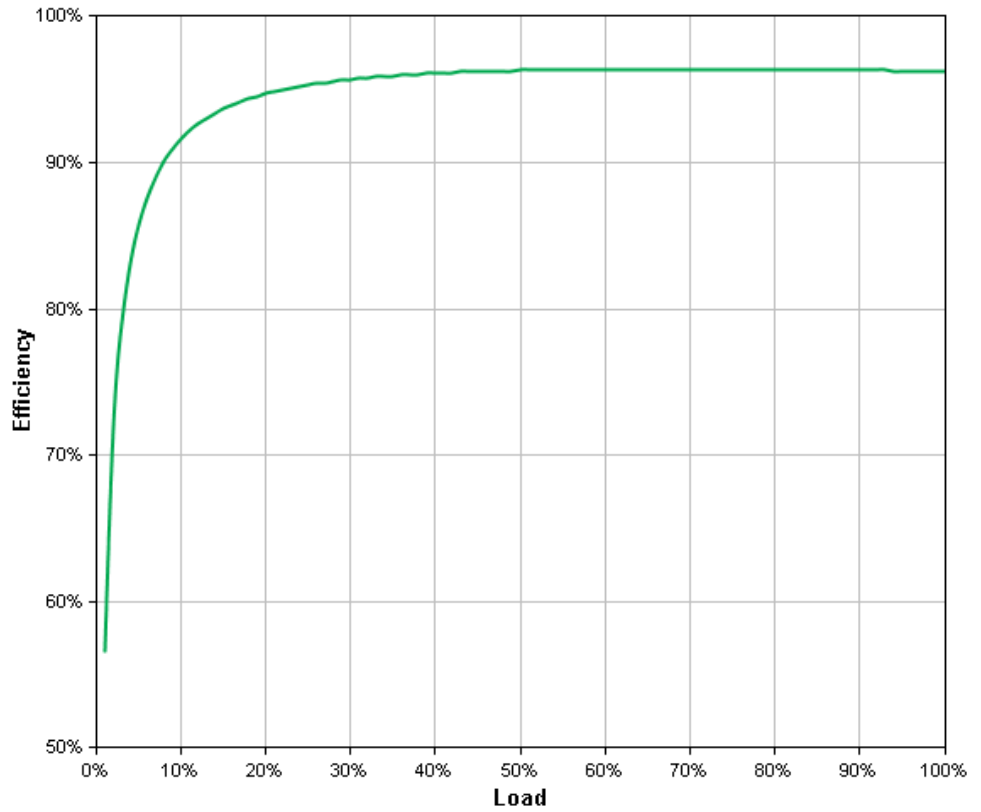
Efficiency Curves

500 kW 400 V



Curve fit to measured efficiency data. All measurements taken in normal operating mode, at typical environmental conditions, with 400 V 50 Hz input and 400 V 50 Hz balanced resistive load (PF = 1.0) output.

500 kW 480 V



Curve fit to measured efficiency data. All measurements taken in normal operating mode, at typical environmental conditions, with 480 V 60 Hz input and 480 V 60 Hz balanced resistive load (PF = 1.0) output.

Derating due to Load Power Factor

The Symmetra PX 250/500kW load power factor is from 0.5 leading to 0.5 lagging without any derating.

Batteries

Efficiency DC to AC (TÜV Certified)

480 V Systems

System	25% load	50% load	75% load	100% load
250 kW	95.5	96.3	96.6	96.5
500 kW	95.5	96.3	96.4	96.3

400/415 V Systems

System	25% load	50% load	75% load	100% load
250 kW	96.0	96.5	96.6	96.3
500 kW	95.8	96.4	96.5	96.3

Electrolyte Values

	Single Cartridge	Single Shelf (6 cartridges)	16 Shelves (96 cartridges)
Electrolyte Volume	2.19 L (0.58 gal)	13.14 L (3.48 gal)	210.24 L (55.68 gal)
Electrolyte Weight	2.88 kg (6.35 lbs)	17.28 kg (38.1 lbs)	276.48 kg (609.6 lbs)
Sulfuric Acid Weight	1.14 kg (2.50 lbs)	6.84 kg (15.0 lbs)	109.44 kg (240.0 lbs)
Note 1: Symmetra PX 250 kW has 6 cartridges per shelf; maximum 16 shelves (8 shelves for each 125 kW) Note 2: Symmetra PX 500 kW has 6 cartridges per shelf; maximum 32 shelves (8 shelves for each 125 kW)			

Material Safety Data Sheets

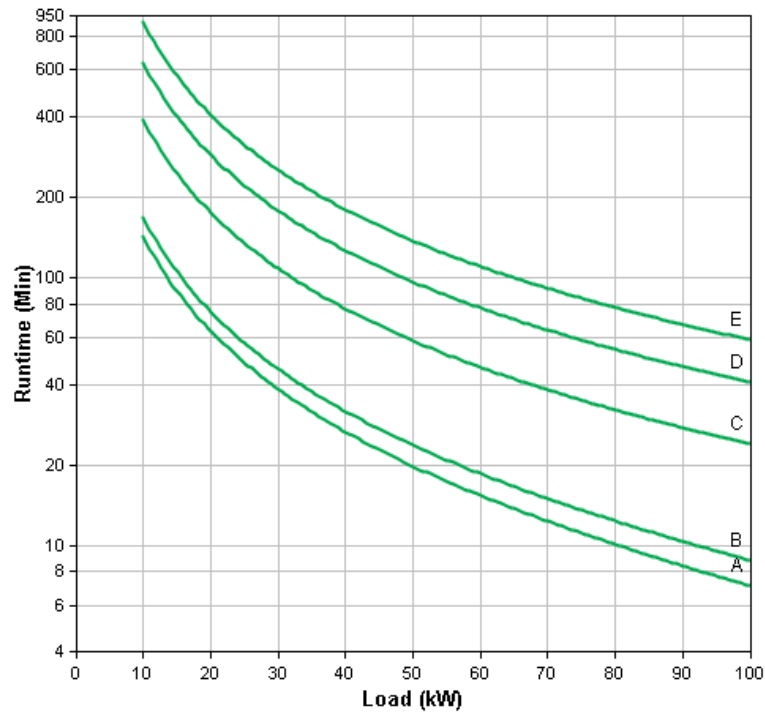
The Symmetra PX 250/500 kW battery cabinets use batteries manufactured by four different vendors; EnerSys, Panasonic, Portalac, and CSB. The vendor of the specific battery can be identified on either the label on the packaging or on the label on the front of the battery.

ID	Battery vendor
C69	CSB
E85	EnerSys
P270	Panasonic
G85	Portalac

The material safety data sheets are placed in the knowledge base on www.apc.com.

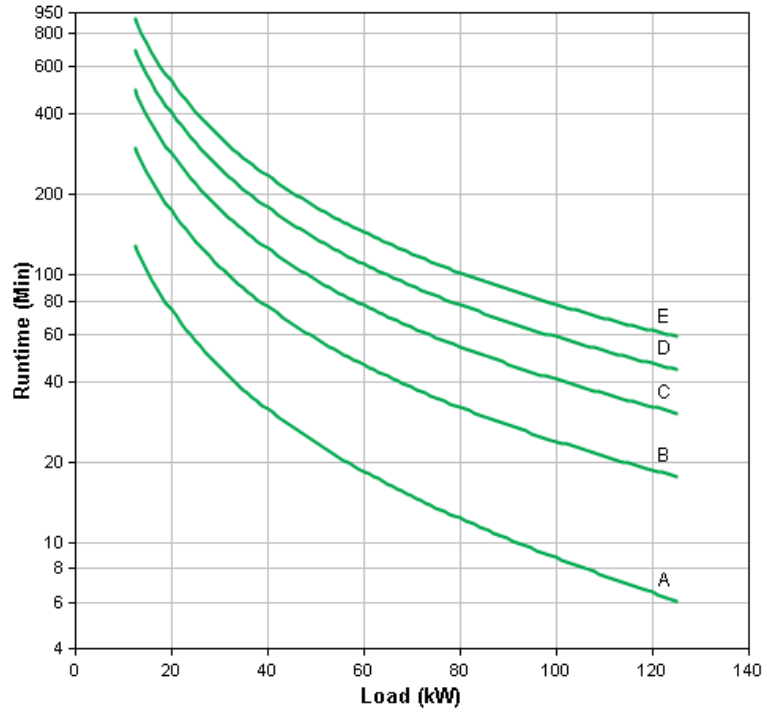
Battery Runtimes

Symmetra PX 100 kW Scalable to 250 kW 400/480 V Battery Run-Times (Minutes)



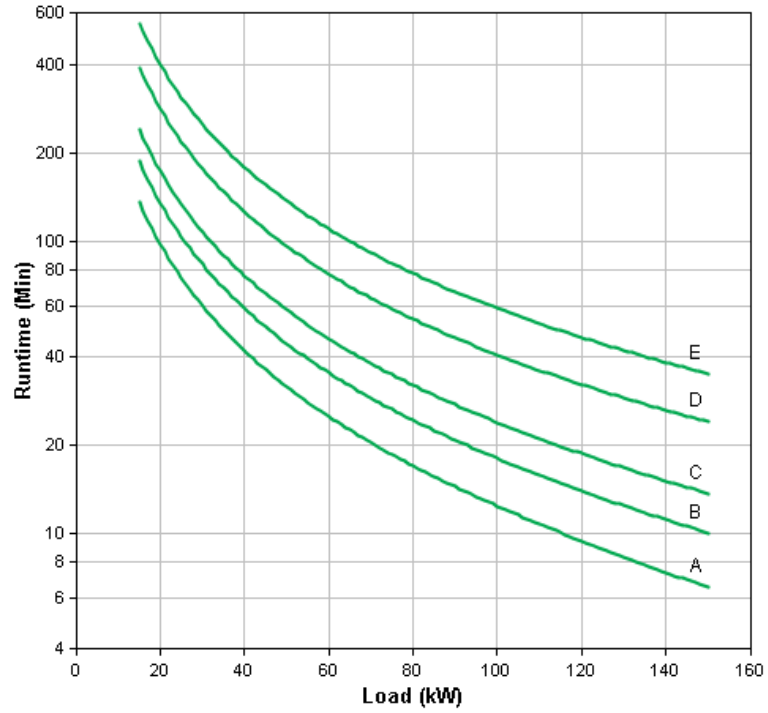
	Part numbers	Load (kW)				
		20	40	60	80	100
A	SY100K250D SY100K250DL-PD SY100K250DR-PD	63	27	15	10	7
B	+ (1)SYBT9-B6 or SYBT9-B6LL	75	32	19	12	9
C	+ (1)SYBFXR8-8	176	76	47	32	24
D	+ (2)SYBFXR8-8	288	126	77	54	41
E	+ (3)SYBFXR8-8	408	180	110	77	59

Symmetra PX 125 kW Scalable to 250/500 kW 400/480 V Battery Run-Times (Minutes)



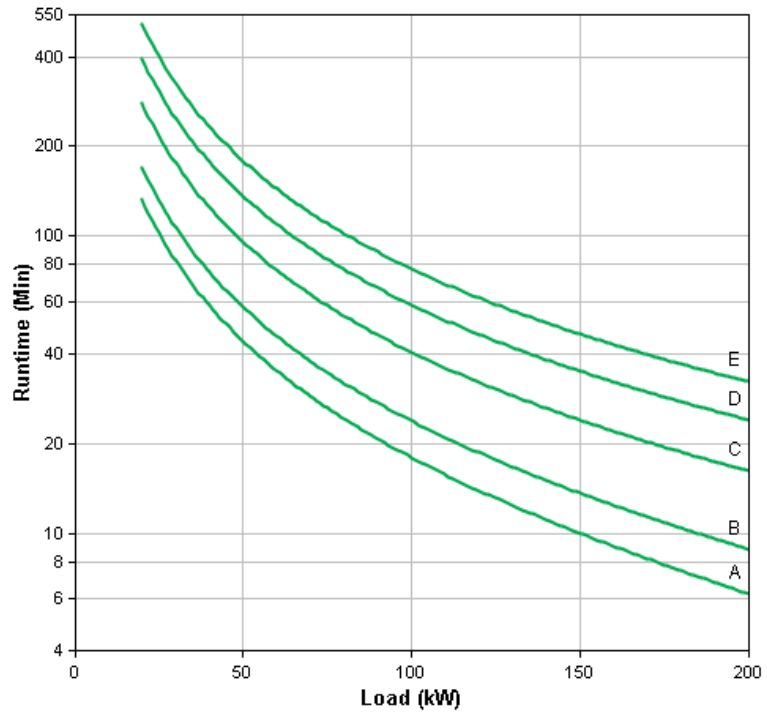
		Load (kW)					
	Part numbers	20	40	60	80	100	125
A	SY125K250D SY125K250DR-PD SY125K250DL-PD	74	32	19	12	9	6
B	+ (1)SYBFXR8-8	174	76	46	32	24	18
C	+ (2)SYBFXR8-8	285	126	77	54	41	31
D	+ (3)SYBFXR8-8	404	179	110	77	59	44
E	+ (4)SYBFXR8-8	529	235	144	102	77	59

Symmetra PX 150 kW Scalable to 250 kW 400/480 V Battery Run-Times (Minutes)



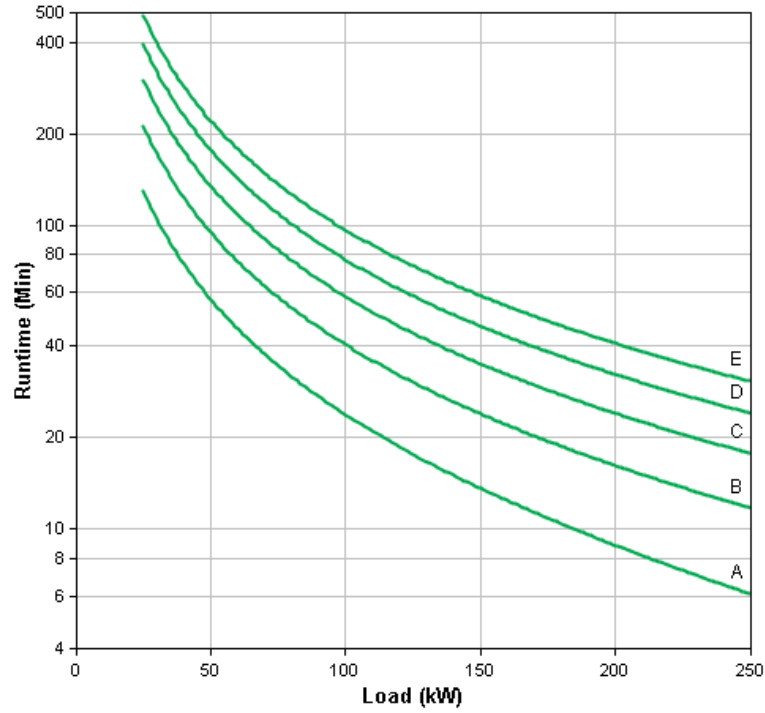
		Load (kW)						
	Part numbers	20	40	60	80	100	125	150
A	SY150K250D SY150K250DL-PD SY150K250DR-PD	97	42	25	17	12	9	7
B	+ (3)SYBT9-B6 or SYBT9-B6LL	134	59	35	24	18	13	10
C	+ (6)SYBT9-B6 or SYBT9-B6LL	173	76	46	32	24	18	14
D	+ (1)SYBFXR8-8	283	125	76	54	41	31	24
E	+ (2)SYBFXR8-8	401	178	109	77	59	44	35

Symmetra PX 200 kW Scalable to 250 kW 400/480 V Battery Run-Times (Minutes)



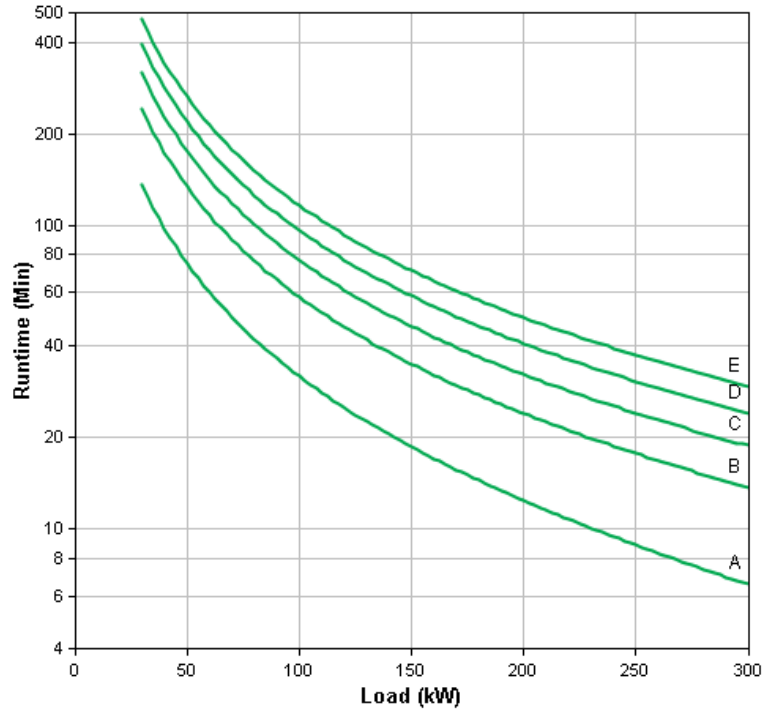
		Load (kW)								
	Part numbers	20	40	60	80	100	125	150	175	200
A	SY200K250S SY200K250DL-PD SY200K250DR-PD	131	58	35	24	18	13	10	8	6
B	+ (3)SYBT9-B6 or SYBT9-B6LL	170	75	46	32	24	18	14	11	9
C	+ (1)SYBFXR8-8	278	124	76	54	41	30	24	19	16
D	+ (2)SYBFXR8-8	394	177	109	77	59	44	35	29	24
E	+ (3)SYBFXR8-8	516	232	143	101	77	59	47	38	32

Symmetra PX 250 kW Scalable to 500 kW 400/480 V Battery Run-Times (Minutes)



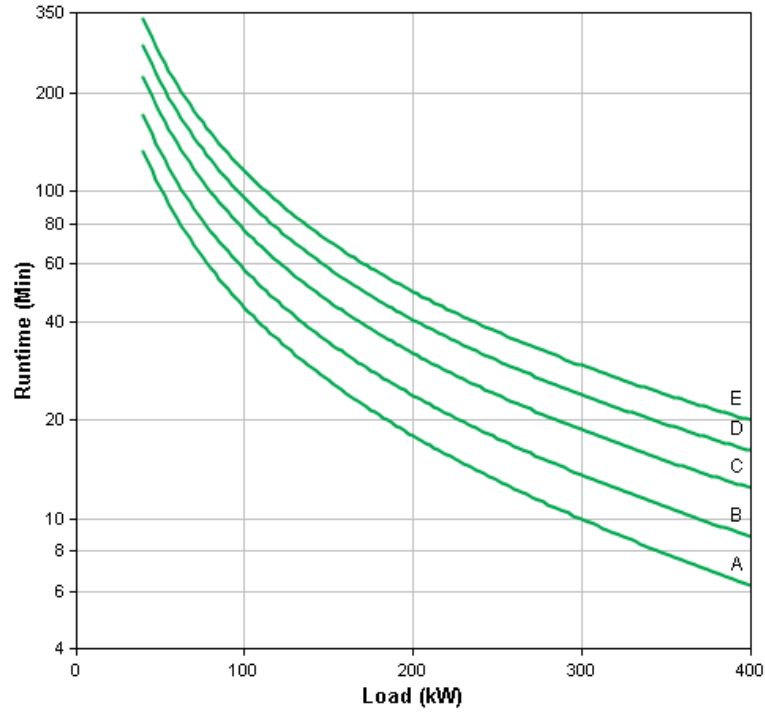
		Load (kW)										
	Part numbers	20	40	60	80	100	125	150	175	200	250	
A	SY250K500D SY250K500DL-PD SY250K500DR-PD	167	74	46	32	24	18	14	11	9	6	
B	+ (1)SYBFXR8-8	273	123	76	53	40	30	24	19	16	12	
C	+ (2)SYBFXR8-8	387	175	108	76	58	44	35	29	24	18	
D	+ (3)SYBFXR8-8	507	230	142	101	77	59	47	38	32	24	
E	+ (4)SYBFXR8-8	632	287	178	126	96	73	59	48	41	31	

Symmetra PX 300 kW Scalable to 500 kW 400/480 V Battery Run-Times (Minutes)



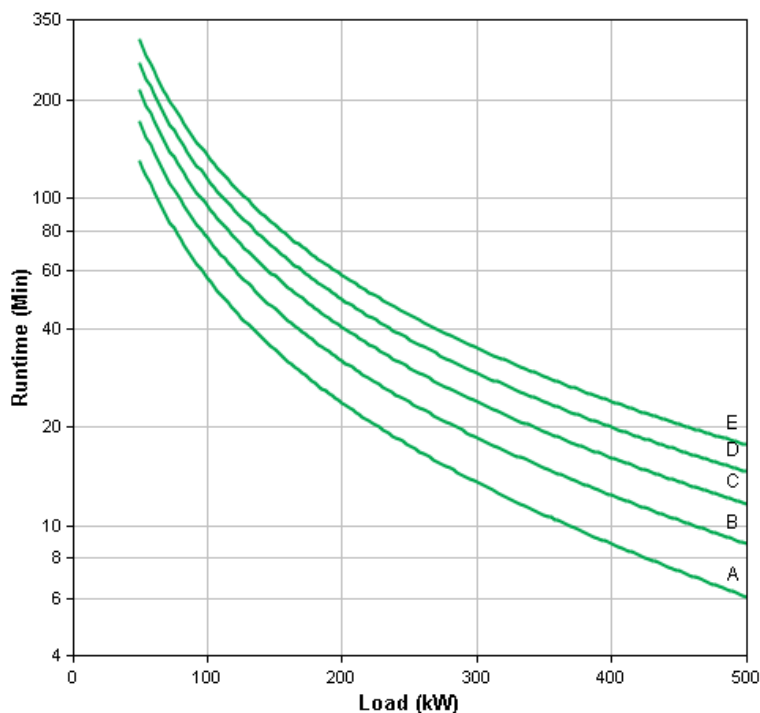
		Load (kW)									
	Part numbers	20	40	60	80	100	125	150	175	200	300
A	SY300K500D SY300K500DL-PD SY300K500DR-PD	215	97	60	42	32	24	19	15	12	7
B	+ (2)SYBFXR8-8	381	174	107	76	58	44	35	29	24	14
C	+ (3)SYBFXR8-8	622	284	177	126	96	73	59	48	41	24
D	+ (4)SYBFXR8-8	749	343	214	152	116	88	71	59	50	30
E	+ (5)SYBFXR8-8	880	403	251	179	137	104	83	69	59	35

Symmetra PX 400 kW Scalable to 500 kW 400/480 V Battery Run-Times (Minutes)



		Load (kW)										
	Part numbers	20	40	60	80	100	125	150	175	200	300	400
A	SY400K500D SY400K500DL-PD SY400K500DR-PD	287	132	82	58	44	33	26	22	18	10	6
B	+ (4)SYBT9-B6 or SYBT9-B6LL	369	171	106	75	58	44	35	28	24	14	9
C	+ (1)SYBFXR8-8	483	224	140	99	76	58	46	38	32	19	12
D	+ (2)SYBFXR8-8	602	280	175	124	95	72	58	48	41	24	16
E	+ (3)SYBFXR8-8	725	337	211	150	115	88	70	58	49	29	20

Symmetra PX 500 kW 400/480 V Battery Run-Times (Minutes)



		Load (kW)											
	Part numbers	20	40	60	80	100	125	150	175	200	300	400	500
A	SY500K500D SY500K500DR-PD SY500K500DL-PD	357	168	105	74	57	43	35	28	24	14	9	6
B	+(1)SYBFXR8-8	468	220	138	98	75	58	46	38	32	19	12	9
C	+(2)SYBFXR8-8	583	275	173	123	94	72	58	48	40	24	16	12
D	+(3)SYBFXR8-8	703	331	209	149	114	87	70	58	49	29	20	15
E	+(4)SYBFXR8-8	825	390	245	176	135	103	83	68	58	35	24	18

Battery Gassing Rates Per Shelf/String (Cubic Feet per Hour)

The battery gassing rates are calculated based on:

- Gassing rate at 2.4 V/cell (ft³/hr) assuming 98% recombination efficiency = 0.00021
- Six cells per cartridge
- Eight cartridges per battery unit
- Six battery units (one battery module) per shelf

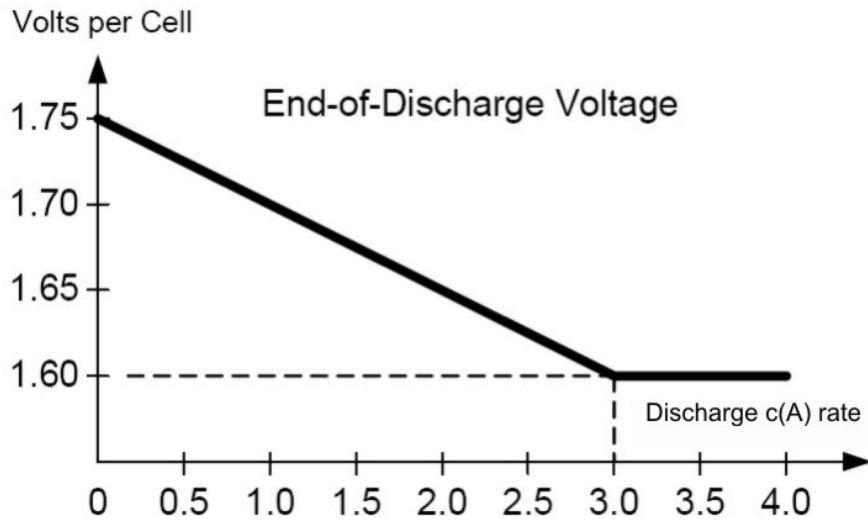
Number of battery modules	1	2	3	4	5	6	7	8
	0.06048	0.12096	0.18144	0.24192	0.30240	0.36288	0.42336	0.48384

Battery Discharge Current

	250 kW	500 kW
I bat at bat nominal, 100% load	452	904
I bat at bat minimum, 100% load	565	1130
I bat at bat minimum, 150% load	678	1356

End of Discharge Voltage at 100% Load

NOTE: The voltage is 1.6 to 1.75 per cell depending on load.



NOTE: C equals $I_{\text{discharge}}$ divided by the battery Ah capacity.

Communication and Management

Network Management Card

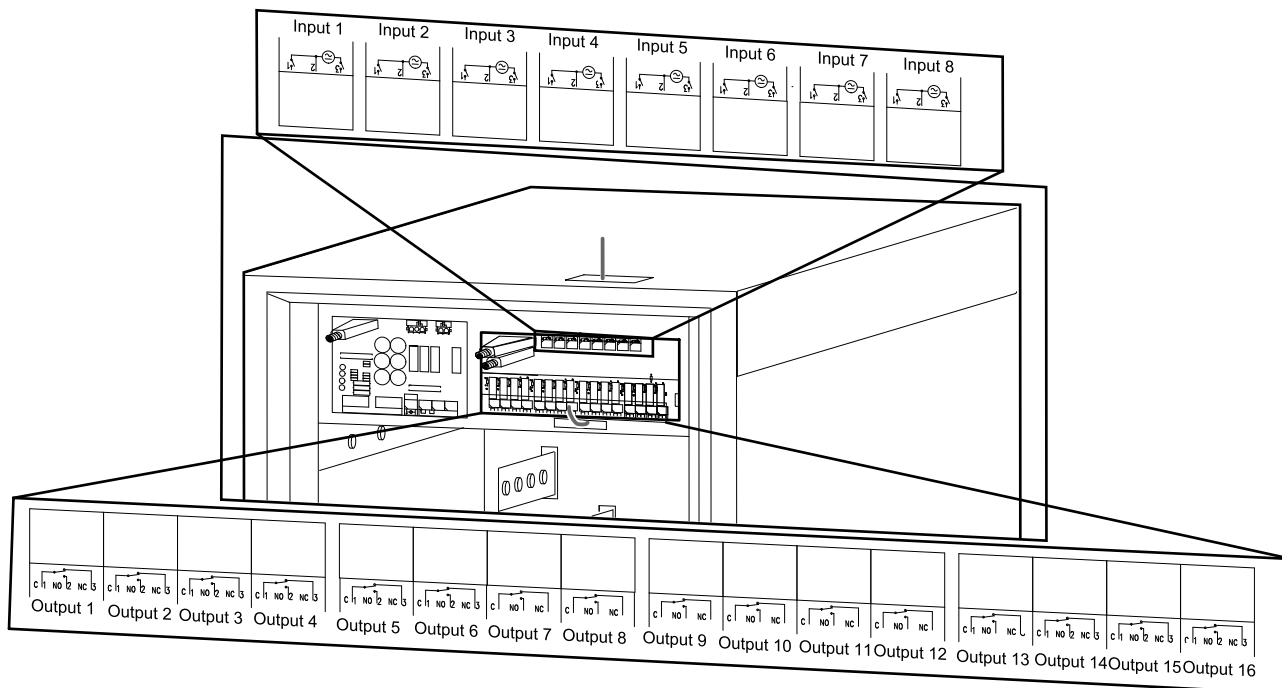
The system is equipped with one network management card for remote monitoring and control of an individual UPS. It is possible to add an additional network management card.

Relay Inputs/Outputs

The relay board informs the user of the operation mode, status, and alarm conditions and has eight input ports and 16 output terminals.

All wiring to the relay board should be considered as field wiring rated minimum 480 V, and must use copper conductors only.

NOTE: Communication cables to the relay board must be run through the openings in the middle of the I/O cabinet via the cable channel to the relay board.



Inputs

All input voltages must have the same ground and 0 V reference.

- Minimum: 12 VAC/VDC
- Maximum: 28 VAC/40 VDC

Input 1	Reduction of charge power
Input 2	Boost charge inhibit
Input 3	Battery ground fault
Input 4	Enable external synchronization
Input 5	Internal use
Input 6	Internal use
Input 7	Door contact
Input 8	Activate mega tie mode

NOTE: When the UPS is installed in environments sensitive to interference, the EMC kit with three ferrite cores must be installed with three loops. Add a clip on ferrite for high frequency noises. Use kit 0J-9147.

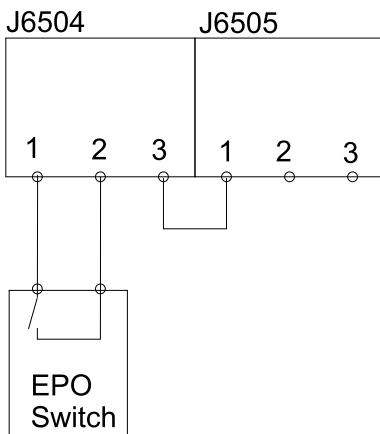
Outputs

- Maximum. 8 A/250 VAC
- Maximum. 8 A/24 VDC

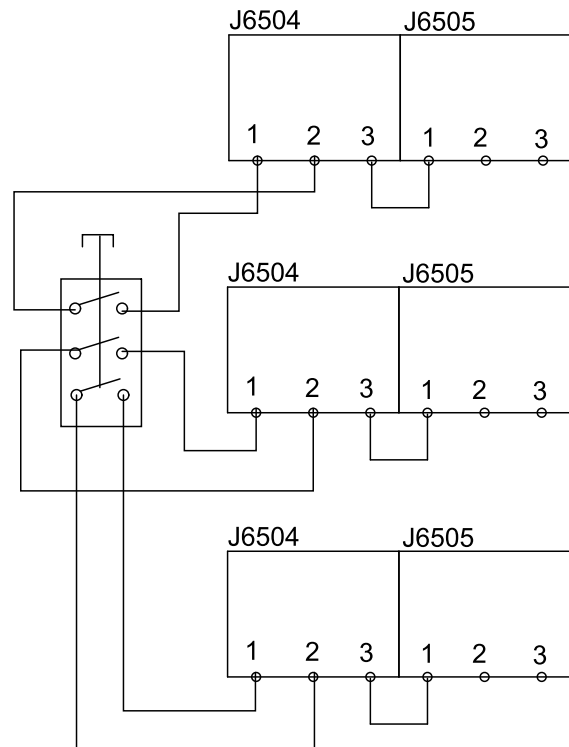
Output 1	Common alarm, configurable
Output 2	Normal operation, configurable
Output 3	Bypass operation, configurable
Output 4	Battery operation, configurable
Output 5	Battery voltage low, configurable
Output 6	Battery fault, configurable
Output 7	Maintenance bypass on, configurable
Output 8	Input outside tolerance, configurable
Output 9	Bypass outside tolerances, configurable
Output 10	Output outside tolerance, configurable
Output 11	Battery disconnected, configurable
Output 12	Overload on inverter/bypass, configurable
Output 13	Option 1, configured via display
Output 14	Option 2, configured via display
Output 15	Option 3, configured via display
Output 16	Option 4, configured via display

Emergency Power Off (EPO)

Single System (Normally Open)



Parallel System (Normally Open)



Compliance

- UL 1778 4.th Edition (cUL)
- FCC47 CFR 15 subpart B
- EN/IEC 62040-1
- EN/IEC 62040-2

Facility Planning

Input Specifications

	250 kW				500 kW			
Input voltage (V)	380 ¹	400	415	480	380 ¹	400	415	480
Voltage range (v)	+/-15% at 100% load (340 - 460 V at 400 V, 408 - 552 V at 480 V) -50% for reduced load (200 V at 400 V, 240 V at 480 V)							
Input frequency (Hz)	40–70 with 10 Hz/sec slewrate							
THDI	< 5% at 100% load							
Nominal input current (A) ²	398	378	364	315	795	756	728	630
Maximum input current (A) ³	437	416	401	346	875	831	801	693
Input current limitation (A) ⁴	447	447	431	372	894	894	861	745
Maximum short circuit level I _{cw} (kA)	Rated short time withstand current I _{cw} : 65 kA. (50 kA with standard maintenance bypass) Rated peak withstand current I _{pk} : I _{cw} x 2.2							
Input power factor correction	0.995 at load = 100% 0.99 at load > 50% 0.97 at load > 25%							
Softstart (ramp-in) (seconds)	Configurable from 1 to 40 (default 10)							

Bypass Specifications

	250 kW				500 kW			
	380 V	400 V	415 V	480 V	380 V	400 V	415 V	480 V
Frequency (Hz)	50/60							
Nominal bypass current (A)	380	361	348	301	760	722	696	601
Maximum short circuit level I _{cw} (kA)	Rated short time withstand current I _{cw} : 65 kA. (50 kA with standard maintenance bypass) Rated peak withstand current I _{pk} : I _{cw} x 2.2							

Output Specifications

	250 kW				500 kW			
	380 V	400 V	415 V	480 V	380 V	400 V	415 V	480 V
Overload capacity	150% for 60 seconds (normal operation) 125% for 10 minutes (normal operation) 150% for 60 seconds (battery operation) 125% for 10 minutes (battery operation) 125% continuous at 480 V and 110% continuous at 400 V (bypass operation) ⁵ 1000% for 100 milliseconds (bypass operation)							
Voltage tolerance	Symmetric load (0-100%): +/-1% static, +/-5% after 2 milliseconds and +/-1% after 50 milliseconds dynamic Asymmetric load (0-100%): +/-3% static							

- 380 V has reduced input voltage window (-10% at 100% load).
- Input current based on rated load and 100% charged batteries.
- Input current based on 100% battery recharge, nominal voltage and rated load.
- Current limitation through electronic current limiting is based on 100% battery recharge and -15% input voltage.
- This is a thermal performance rating. The continuous overload is not supported by the recommended input protection of the maintenance bypass.

	250 kW				500 kW			
	380 V	400 V	415 V	480 V	380 V	400 V	415 V	480 V
Nominal output current (A)	380	361	348	301	760	722	696	601
Output frequency (sync to mains) (Hz)	50/60							
Slew rate (Hz/Sec)	0.25 - 6							
THDU	< 2% linear load < 3% non-linear load							
Output power factor	1							
Dynamic load response	+/- 5%							

Battery Specifications

	250 kW	500 kW
Nominal battery voltage (VDC)	2 x +/- 288	
Battery current at 100% load and nominal battery voltage (A)	452	904
Battery current at 100% load and minimum battery voltage (A)	565	1130
End voltage (V)	1.6–1.75/cell (automatic, depending on load)	
Short-circuit withstand rating (kA)	40	

The UPS supports customer-specific battery solutions with 144 cells (+/- 6 cells) for runtime optimization. The display has settings for number of cells on DC voltage levels (V/cell).

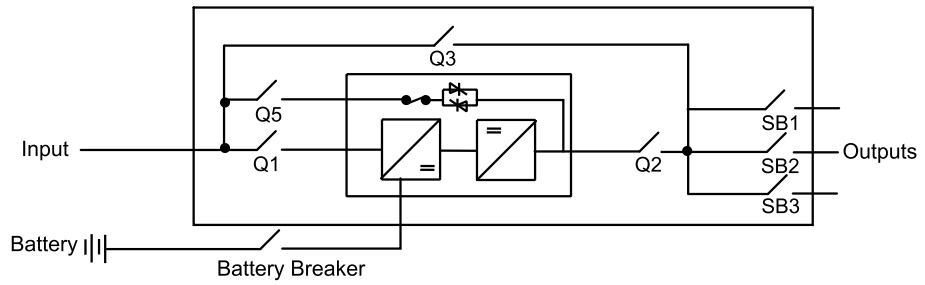
Battery type	Sealed lead acid/wet cells
Nominal voltage (VDC)	+/- 276 to +/- 300
Float voltage (VDC)	+/- 308 to +/- 345
Boost charge voltage (VDC)	+/- 308 to +/- 345
Equalize charge voltage (VDC)	+/- 308 to +/- 345
End of discharge voltage at 100% load (VDC)	+/- 221 to +/- 263
Charging power	20% of nominal power at 0–90% load 10% of nominal power at 100% load
Typical recharge time	3.5 hours

Overview of Systems with Maintenance Bypass

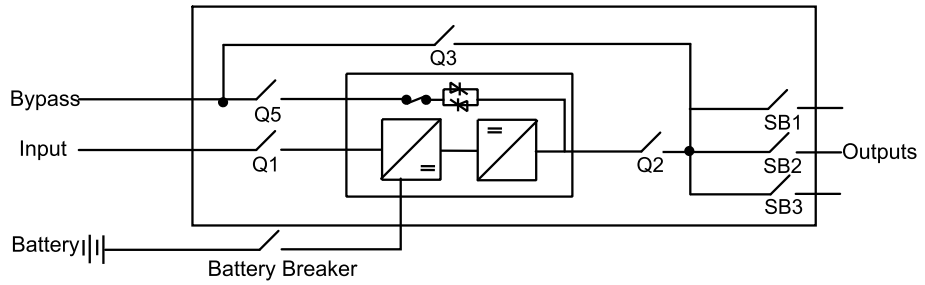
Single Configurations

NOTICE
<p>HAZARD OF EQUIPMENT DAMAGE</p> <p>The neutral connection to utility/mains must not be disconnected even in battery operation. Therefore 4–pole disconnectors/switches must not be used on the bypass.</p> <p>Failure to follow these instructions can result in equipment damage.</p>

Single Utility/Mains with Maintenance Bypass



Dual Utility/Mains with Maintenance Bypass

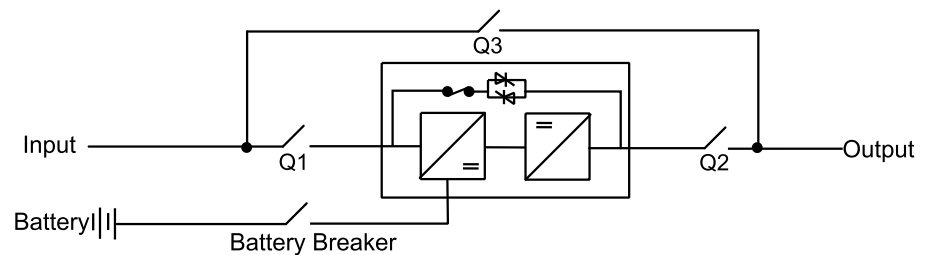


Overview of Systems without Maintenance Bypass

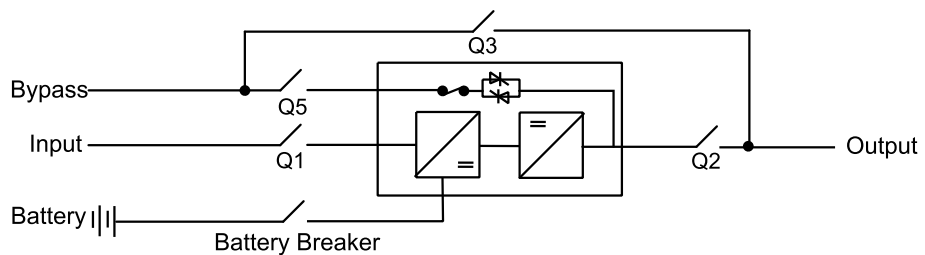
Single Configurations

NOTICE
<p>HAZARD OF EQUIPMENT DAMAGE</p> <p>The neutral connection to utility/mains must not be disconnected even in battery operation. Therefore 4-pole disconnectors/switches must not be used on the bypass.</p> <p>Failure to follow these instructions can result in equipment damage.</p>

Single Utility/Mains without Maintenance Bypass

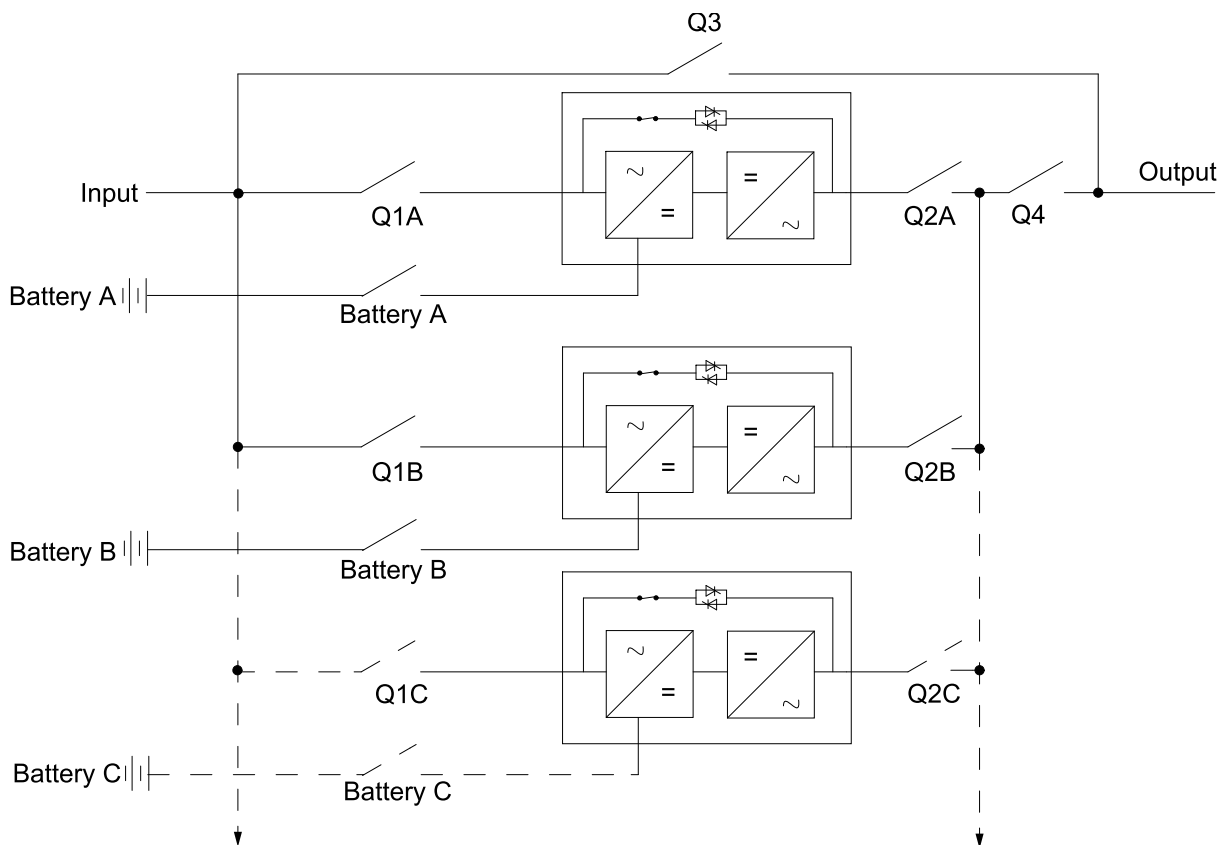


Dual Utility/Mains without Maintenance Bypass

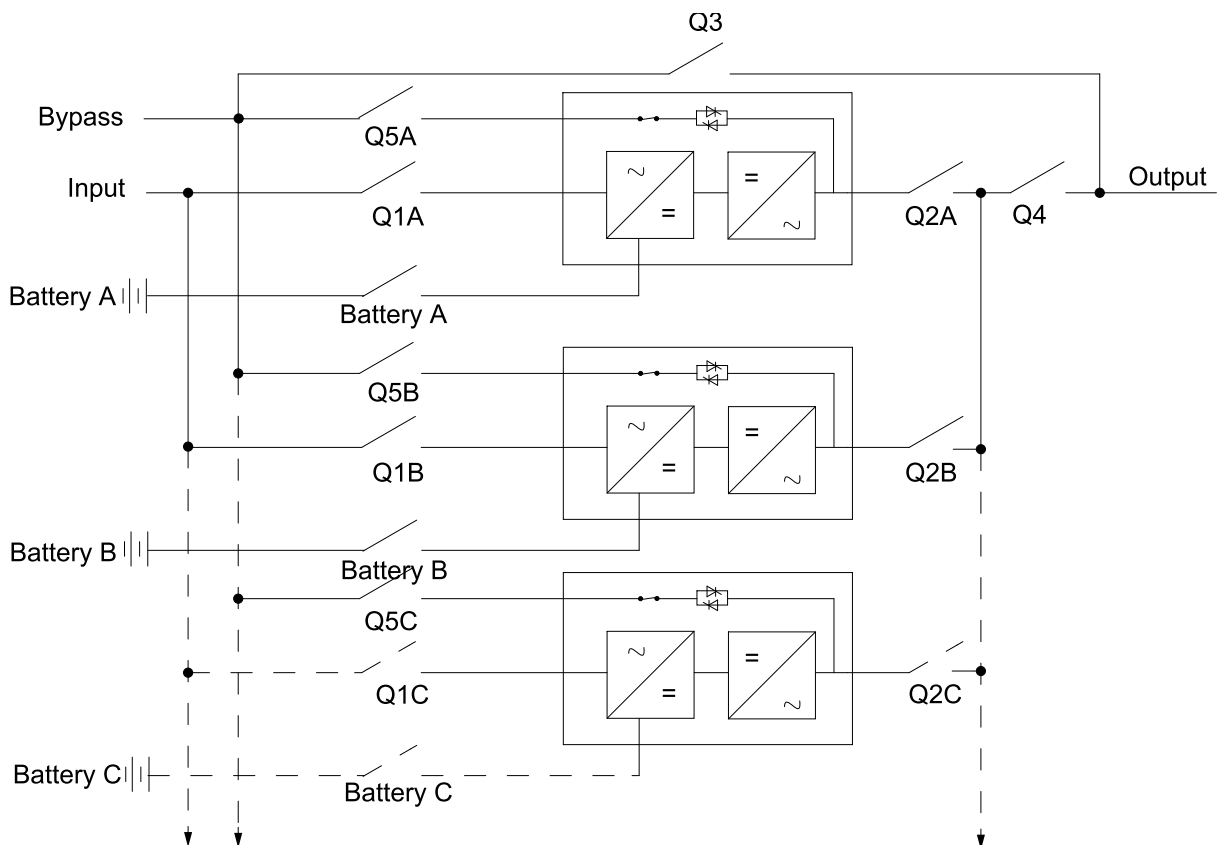


Parallel Configurations

Single Utility/Mains



Dual Utility/Mains



Fuses, Breakers, and Cables in the US

In single utility/mains systems, supply the UPS from a grounded 4–wire WYE service.

Schneider Electric also supports 3–wire installations if the utility/mains transformer is a grounded WYE transformer located in the same building. In this installation, the UPS system must be installed as a separately derived system. Leakage currents will occur in the bonding jumper and the technical/system earth.

In dual utility/mains systems, use a 4–wire supply for the bypass and a 3–wire supply for the input. Both must be WYE sources. Delta input supply for either input or bypass is not permitted.

NOTICE

HAZARD OF EQUIPMENT DAMAGE

In 3–wire systems, Schneider Electric recommends that you add a label with the following wording: “Notice! The UPS is installed as a 3–wire system so the system must only be loaded with phase-to-phase load.”

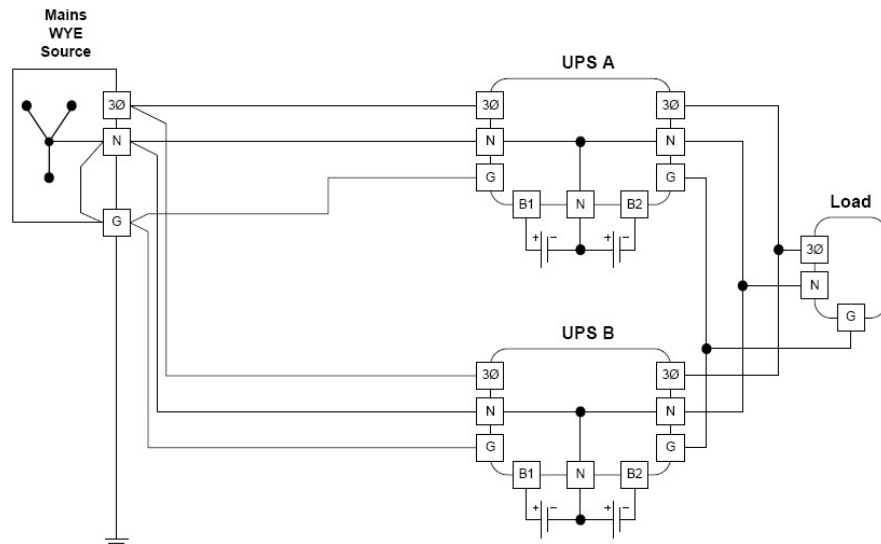
Failure to follow these instructions can result in equipment damage.

NOTE: 3–wire installations using bonding wire will result in a higher leakage current. Leakage current for a typical installation is usually within UL and industry standard requirements.

Parallel Systems

NOTE: For parallel systems, the cable lengths for bypass and output must be the same for all parallel UPS units to ensure correct load sharing in bypass operation. In single utility/mains installations this applies to input cables.

Schneider Electric recommends that the Symmetra PX 250/500 kW parallel system is supplied from a grounded 4–wire WYE service.



However if the load is a 3–phase load, the three alternatives below for 3–wire installations are allowed:

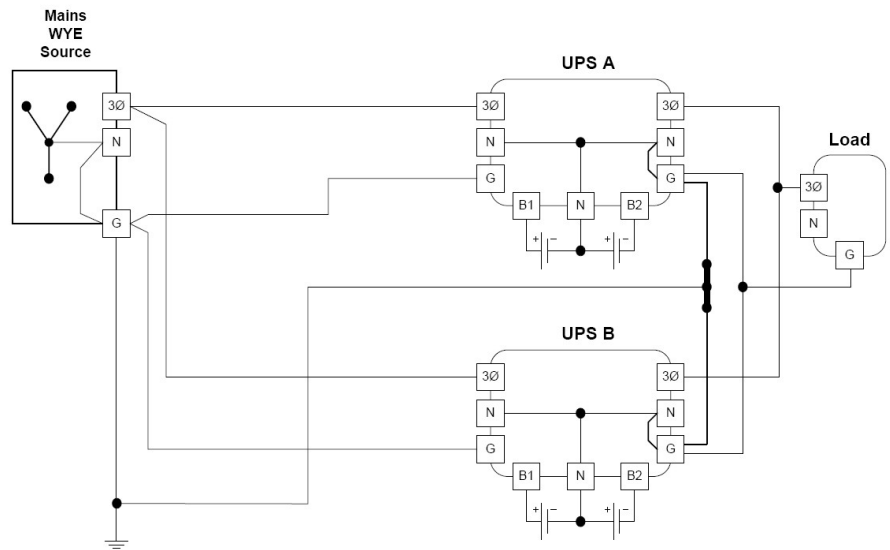
NOTICE

HAZARD OF MALFUNCTIONING

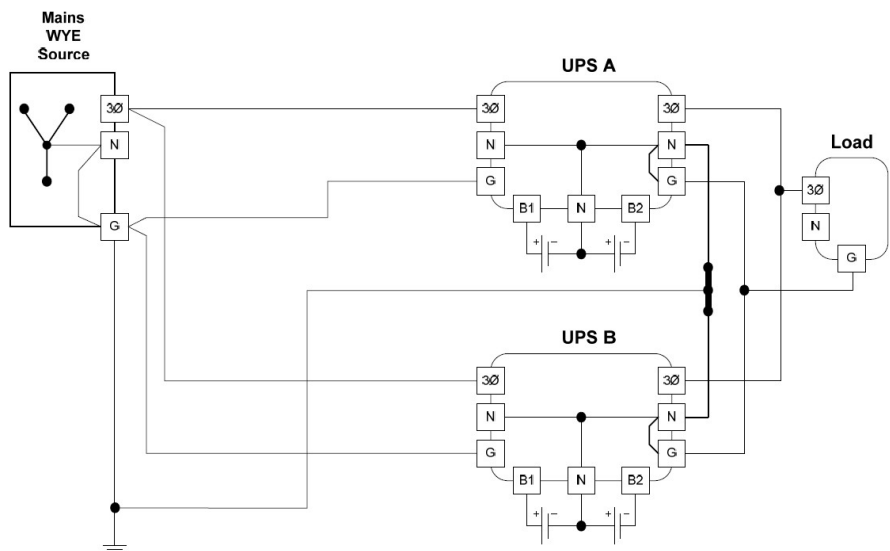
Phase-Neutral loading is not permitted.

Failure to follow these instructions can result in equipment damage.

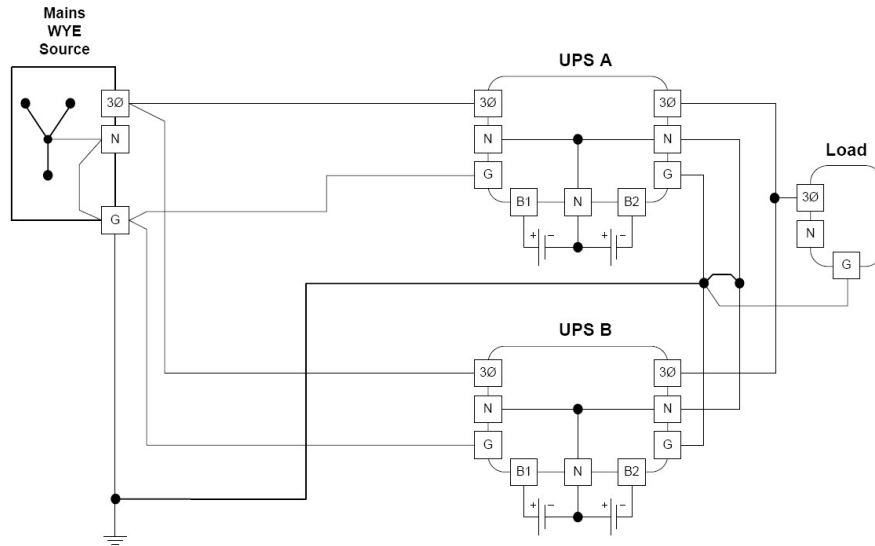
- Connect an N-G bond in each UPS, and connect the UPS output ground via tap conductors to a common grounded electrode bus and a single grounding electrode conductor. See NEC 250.30 (A)(4), including Exception #1.



- Connect an N-G bond in each UPS, and connect the UPS output neutral via tap conductors to a common grounded electrode bus and a single grounding electrode conductor. See NEC 250.30 (A)(4), including Exception #1.



- Connect an output neutral from each UPS to a neutral/bonding bus in the maintenance bypass panel, and bond the maintenance bypass panel neutral bus to the ground with a single N-G bonding jumper and a grounding electrode conductor. See NEC 250.30 (A) Exception #1.



NOTE: Schneider Electric recommends that each UPS in the parallel system has a neutral connection installed. Contact Schneider Electric for information on other configurations.

Recommended Fuses, Breakers, and Cable Sizes in the US

⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

The product must be installed according to the specifications and requirements as defined by Schneider Electric. It concerns in particular the external and internal protections (upstream circuit breakers, battery circuit breakers, cabling, etc.) and environmental requirements. No responsibility is assumed by Schneider Electric if these requirements are not respected.

Failure to follow these instructions will result in death or serious injury.

⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH

All wiring must comply with all applicable national and/or local electrical codes.

Failure to follow these instructions will result in death or serious injury.

⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH

Appropriate disconnect devices must be provided external to the equipment.

Failure to follow these instructions will result in death or serious injury.

NOTE: See *Required Breaker Settings for Input Overload and Short-Circuit Protection for Breakers with Electronic Trip Units*, page 34 for information on breaker settings.

Temperature rating of conductors is 90 °C/194 °F and with 75 °C terminations. Refer to table 310-16 of NEC, 75 °C column for maximum ampacity. Use only copper conductors.

Equipment grounding conductors are sized in accordance with NEC Article 250-122 and Table 250-122.

The cable sizes are recommendations for maximum configurations with three current carrying conductors in a raceway. For other configurations see the label inside the front door of the I/O cabinet.

NOTE: A separate 800 A protection device for bypass (similar to dual utility/ mains) is required for single utility/mains systems from 450 kW 400 V or 475 kW 415 V.

Installations with 100% Rated Circuit Breakers or Fuses

250 kW						
	400 V		415 V		480 V	
	OCPD (A)	Cable	OCPD (A)	Cable	OCPD (A)	Cable
Input Q1	450	2 x 4/0	450	2 x 4/0	400	1 x 500
Bypass Q5 ⁶	400	2 x 2/0	350	2 x 2/0	350	2 x 2/0
Battery ⁷	500	2 x 4/0	500	2 x 4/0	500	2 x 4/0
Output Q2	400	1 x 500	350	1 x 500	350	1 x 350

Use breaker or class J or class L fuses.

Installations with 100% Rated Circuit Breakers or Fuses

500 kW						
	400 V		415 V		480 V	
	OCPD (A)	Cable	OCPD (A)	Cable	OCPD (A)	Cable
Input Q1	1000	3 x 400	1000	3 x 400	800	2 x 500
Bypass Q5 ⁶	800	3 x 250	700	3 x 250	700	3 x 4/0
Battery ⁷	1000	3 x 400	1000	3 x 400	1000	3 x 400
Output Q2	800	2 x 500	700	2 x 500	700	2 x 350

Use breaker or class J or class L fuses.

Installations with 80% Rated Circuit Breakers

250 kW						
	400 V		415 V		480 V	
	OCPD (A)	Cable	OCPD (A)	Cable	OCPD (A)	Cable
Input Q1	600	2 x 300	600	2 x 250	450	2 x 4/0
Bypass Q5 ⁶	500	2 x 4/0	450	2 x 4/0	400	2 x 3/0
Battery ⁷	500	2 x 4/0	500	2 x 4/0	500	2 x 4/0
Output Q2	500	2 x 4/0	450	2 x 4/0	400	1 x 500

Installations with 80% Rated Circuit Breakers

500 kW						
	400 V		415 V		480 V	
	OCPD (A)	Cable	OCPD (A)	Cable	OCPD (A)	Cable
Input Q1	Not allowed		Not allowed		1000	3 x 400
Bypass Q5 ⁶	Not allowed		Not allowed		800	3 x 250
Battery ⁷	1000	3 x 400	1000	3 x 400	1000	3 x 400
Output Q2	Not allowed		Not allowed		800	2 x 500

6. Maximum input protection is 800 A and the maximum cable size is 250 kcmil.

7. If the UPS system includes a battery breaker cabinet and has one or multiple battery strings, each individual string must have a correctly sized fast fuse installed for correct isolation of the battery.

Typical Q3 and Q4 Breaker Sizes for Parallel Systems

250 kW units in parallel						
	400 V		415 V		480 V	
OCPD Rating	80%	100%	80%	100%	80%	100%
500 kW	1000	800	1000	700	800	700
750 kW	1600	1200	1600	1200	1200	1000
1 MW	2000	1600	2000	1600	1600	1600
1.5 MW	-	-	-	-	-	-
2 MW	-	-	-	-	-	-

Typical Q3 and Q4 Breaker Sizes for Parallel Systems

500 kW units in parallel						
	400 V		415 V		480 V	
OCPD Rating	80%	100%	80%	100%	80%	100%
500 kW	-	-	-	-	-	-
750 kW	-	-	-	-	-	-
1 MW	2000	1600	2000	1600	1600	1600
1.5 MW	3000	2500	3000	2500	2500	2000
2 MW	4000	3000	4000	3000	4000	2500

Recommended Bolt and Lug Sizes

Cable size	Terminal bolt diameter	Single hole lug	NEMA 2 lug	Crimping tool/die
4/0 AWG	M10	Panduit LCA 4/0-12-X	Panduit LCD 4/0-12-X	Panduit CT-720/CD-720-3
250 kcmil	M10	Panduit LCA250-12-X	Panduit LCD250-12-X	Panduit CT-720/CD-720-3
300 kcmil	M10	Panduit LCA300-12-X	Panduit LCD300-12-X	Panduit CT-720/CD-720-4
350 kcmil	M10	Panduit LCA350-12-X	Panduit LCD350-12-X	Panduit CT-720/CD-720-5
400 kcmil	M10	Panduit LCA400-12-6	Panduit LCD400-12-6	Panduit CT-720/CD-720-6
500 kcmil	M10	Panduit LCA500-12-6	Panduit LCD500-12-6	Panduit CT-720/CD-720-7

Fuses, Breakers, and Cables in Europe, Africa, and Asia

⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

The product must be installed according to the specifications and requirements as defined by Schneider Electric. It concerns in particular the external and internal protections (upstream circuit breakers, battery circuit breakers, cabling, etc.) and environmental requirements. No responsibility is assumed by Schneider Electric if these requirements are not respected.

Failure to follow these instructions will result in death or serious injury.

⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH

All wiring must comply with all applicable national and/or local electrical codes.

Failure to follow these instructions will result in death or serious injury.

⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH

Appropriate disconnect devices must be provided external to the equipment.

Failure to follow these instructions will result in death or serious injury.

NOTE: For parallel systems, the cable lengths for bypass and output must be the same for all parallel UPS units to ensure correct load sharing in bypass operation. In single utility/mains installations this applies to input cables.

NOTE: See *Required Breaker Settings for Input Overload and Short-Circuit Protection for Breakers with Electronic Trip Units*, page 34 for information on breaker settings.

Supply the UPS from a 5-wire TN-S system (L1, L2, L3, N, PE).

The recommended cable sizes are based on an environment with an ambient temperature of 40 °C (104 °F).

Temperature ratings of conductors: 90 °C (194 °F).

Refer to IEC 60364-5-52 for installation methods. The cable sizes are recommendations for maximum configurations and copper cables. For other system size configurations see label inside of I/O cabinet front door.

Recommended Cable Sizes in Systems with Breaker Protection

Installation method	OCPD (A)	B1 (mm ²)	B2 (mm ²)	C (mm ²)	OCPD (A)	B1 (mm ²)	B2 (mm ²)	C (mm ²)
	400 V				415 V			
	250 kW							
Input	400 ¹	2 x 95	2 x 120	2 x 95	400 ⁸	2 x 95	2 x 120	2 x 95
Bypass	400	2 x 95	2 x 120	2 x 95	355	2 x 95	2 x 120	2 x 95
Battery ⁹	500	1 x 120	3 x 95	2 x 95	500	1 x 120	3 x 95	2 x 95
Output	400	2 x 95	2 x 120	2 x 95	355	2 x 95	2 x 120	2 x 95
	500 kW							
Input	800	4 x 120	-	3 x 150	800 ⁸	4 x 120	-	3 x 150
Bypass	800	4 x 120	-	3 x 150	800	4 x 120	-	3 x 150
Battery ⁹	1000	-	-	3 x 240	1000	-	-	3 x 240
Output	800	4 x 120	-	3 x 150	800	4 x 120	-	3 x 150

8. The breaker must comply with IEC 60947-2 which guarantees a non-tripping current of 1.05 times current setting for 2 hours. Alternative breaker size must be higher than stated current.
9. If the UPS system includes a battery breaker cabinet and has one or multiple battery strings, each individual string must have a correctly sized fast fuse installed for correct isolation of the battery.

Recommended Cable Sizes in Systems with Fuse Protection

Installation method	OCPD (A)	B1 (mm ²)	B2 (mm ²)	C (mm ²)	OCPD (A)	B1 (mm ²)	B2 (mm ²)	C (mm ²)
	400 V				415 V			
	250 kW							
Input	500	2 x 95	2 x 120	2 x 150	400 ¹⁰	2 x 95	2 x 120	2 x 95
Bypass	400	2 x 95	2 x 120	2 x 95	355	2 x 95	2 x 95	1 x 185
Battery ¹¹	500	1 x 120	3 x 95	2 x 95	500	1 x 120	3 x 95	2 x 95
Output	400	2 x 95	2 x 120	2 x 95	355	2 x 95	2 x 95	1 x 185
	500 kW							
Input	1000	-	-	4 x 150	1000	-	-	4 x 150
Bypass ¹⁰	800	4 x 120	-	3 x 150	800	4 x 120	-	3 x 150
Battery ¹¹	1000	-	-	3 x 240	1000	-	-	3 x 240
Output	800	4 x 120	-	3 x 150	800	4 x 120	-	3 x 150

Typical Q3 and Q4 Breaker Sizes for Parallel Systems

	250 kW		500 kW	
	400 V	415 V	400 V	415 V
For 2 UPS units (A)	800	800	1600	1600
For 3 UPS units (A)	1250	1250	2500	2000
For 4 UPS units (A)	1600	1600	3200	3200

Required Breaker Settings for Input Overload and Short-Circuit Protection for Breakers with Electronic Trip Units

Single Utility/Mains Installation (Common Input and Bypass Breaker)

	Input Breaker
In	Maximum input current
STPU	In x A (3 < A < 4)
STD	Maximum 100 ms
LTD	Maximum 3 x In in 5s
linst	In x 5

Dual Utility/Mains Installation (Separate Input and Bypass Breaker)

	Input Breaker	Bypass Breaker
In	Maximum input current	Maximum input current
STPU	In x A (3 < A < 4)	In x B (10 < B < 12)
STD	Maximum 100 ms	Maximum 100 ms
LTD	Maximum 3 x In in 5s	Maximum 3 x In in 5s
linst	In x 5	In x 15

10. Maximum input protection is 800 A.

11. If the UPS system includes a battery breaker cabinet and has one or multiple battery strings, each individual string must have a correctly sized fast fuse installed for correct isolation of the battery.

Torque Specifications

Bolt size M8	Bolt size M10
13.5 Nm	30 Nm

Physical

Weights and Dimensions

Modules	Weight kg (lbs)
Power module (SYPM25KD)	42 (92)
Battery unit (SYBTU2-PLP, SYBTU2-PLPLL)	25.5 (56)
Static bypass switch 250kVA (SYSW250KD)	79 (174)
Static bypass switch 500kVA (SYSW500KD)	108 (238)

Cabinets	Weight kg (lbs)
I/O cabinet (SYIOF500KD)	332 (730)
I/O cabinet with maintenance bypass (SYIOF500KMBR)	695 (1529)
Power module cabinet (SYPF250KD)	243 (535)
Battery cabinet (SYBFXR8)	374 (822)
Bottom feed cabinet (SYBFF)	150 (330)
Battery side car (SYBSC)	149 (328)
Battery breaker cabinet (SYBBE, SYBBE-UL)	327 (719)

Shipping Weights and Dimensions

Modules	Weight kg (lbs)	Height mm (in)	Width mm (in)	Depth mm (in)
Power module (SYPM25KD)	48 (106)	285 (11.22)	585 (23.03)	935 (36.81)
Battery unit (SYBTU2-PLP, SYBTU2-PLPLL)	27 (60)	178 (7.08)	108 (4.25)	610 (24)
Static bypass switch 250kVA (SYSW250KD)	105 (231)	930 (36.61)	780 (30.71)	915 (36.02)
Static bypass switch 500kVA (SYSW500KD)	134 (295)	930 (36.61)	780 (30.71)	915 (36.02)

Cabinets	Weight kg (lbs)	Height mm (in)	Width mm (in)	Depth mm (in)
I/O cabinet (SYIOF500KD)	375 (827)	2135 (84.06)	745 (29.33)	1210 (47.64)
I/O cabinet with maintenance bypass (SYIOF500KMBR)	752 (1658)	2150 (84.65)	1120 (44.09)	1270 (50)
Power module cabinet (SYPF250KD)	280 (617)	2135 (84.06)	750 (29.53)	1210 (47.64)
Battery cabinet (SYBFXR8)	431 (950)	2150 (84.65)	1120 (44.09)	1270 (50)
Bottom feed cabinet (SYBFF)	186 (410)	2135 (84.06)	745 (29.33)	1210 (47.64)
Battery side car (SYBSC)	185 (408)	2150 (84.65)	745 (29.33)	1210 (47.64)
Battery breaker cabinet (SYBBE, SYBBE-UL)	365 (805)	2135 (84.06)	750 (29.53)	1210 (47.64)

Clearance

⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH

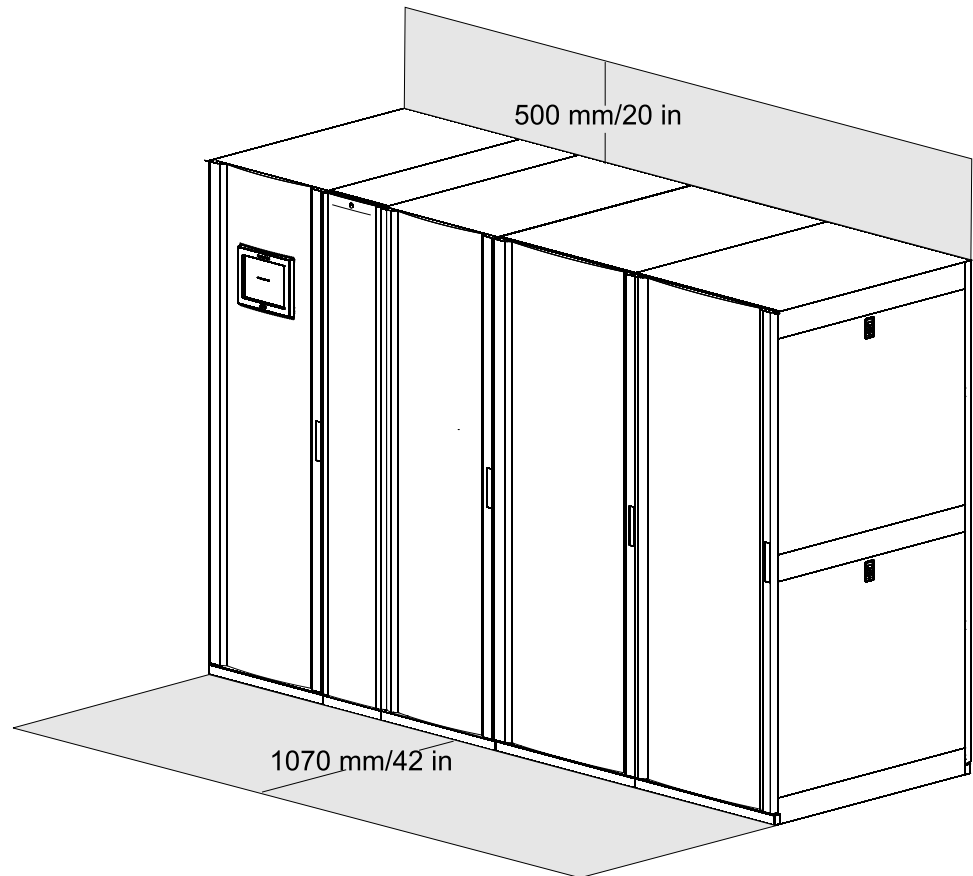
The required free space to other equipment containing live parts is 1219 mm (48 in).

Failure to follow these instructions will result in death or serious injury.

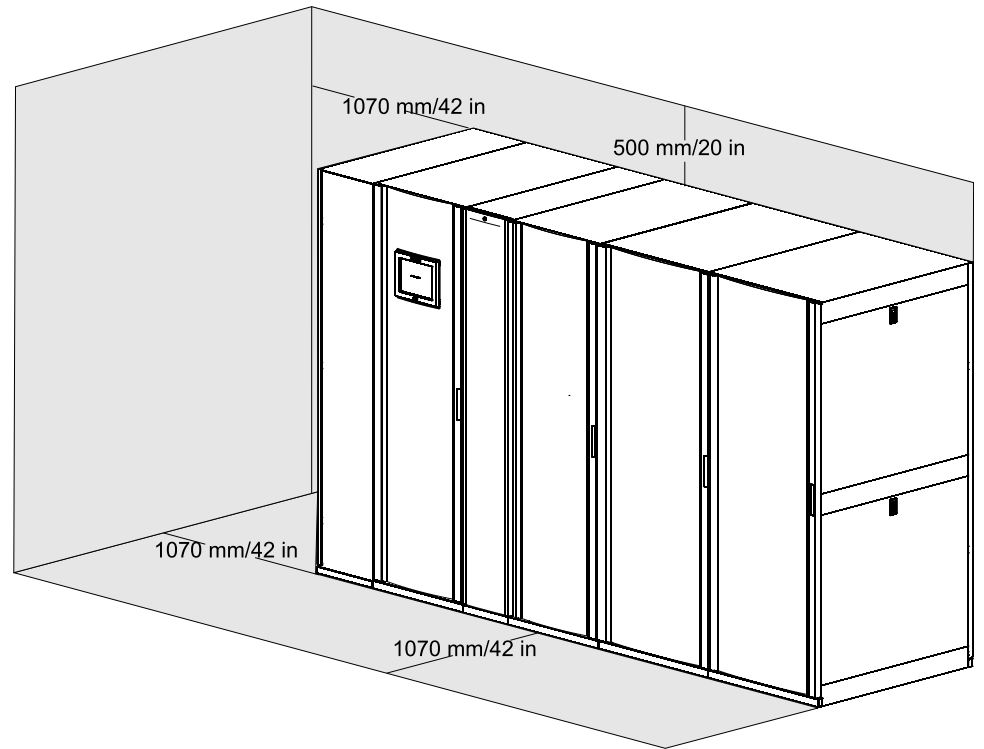
NOTE: Clearance dimensions are published for airflow and service access only. Consult with the local safety codes and standards for additional requirements in your local area.

The UPS system can be placed up against the wall as there is no requirement for rear access. However, if the UPS system installation is done in a manner that prevents rolling a cabinet forward and into a position where service can be performed, rear service access is required. In these cases, recommended clearance between the rear of the cabinet and the wall is 1070 mm (42 in). Examples of these cases would be installation on a housekeeping pad that elevates the UPS off the floor by 100 mm (4 in) or cabinets with bottom cable entry.

Symmetra PX 250/500 kW without Maintenance Bypass



Symmetra PX 250/500 kW with Maintenance Bypass



Environmental

Operating Temperature	0 to 40° C
Storage Temperature	-15 to 40° C for systems with batteries -30 to 70° C for systems without batteries
Operating Relative Humidity	0 - 95%
Storage Relative Humidity	0 - 95%
Operating Elevation	0-1000 m: 100% load 1000-1500 m: 95% load 1500-2000 m: 91% load 2000-2500 m: 86% load 2500-3000 m: 82% load
Storage Elevation	0-15000 meters
Audible noise at 1 meter from surface of unit @ 25° C	480 V 100% load: <54 dBA 480 V 70% load: <45 dBA 400 V 100% load: <60 dBA 400 V 70% load: <49 dBA
Protection Class	NEMA 1, IP 20
Colour	Black

Heat Dissipation

	100 kW	125 kW	150 kW	175 kW	200 kW	225 kW	250 kW	275 kW	300 kW
Heat dissipation ¹² (BTU/hr)	14 217	17 771	21 325	24 879	28 433	31 968	35 542	39 096	42 650
Heat dissipation ¹³ (BTU/hr)	17 103	21 379	25 655	29 931	34 207	38 483	42 759	47 035	51 310

	325 kW	350 kW	375 kW	400 kW	425 kW	450 kW	475 kW	500 kW
Heat dissipation ¹² (BTU/hr)	46 204	49 758	53 313	56 867	60 421	63 975	67 529	71 083
Heat dissipation ¹³ (BTU/hr)	55 586	59 852	64 138	68 414	72 690	76 966	81 241	85 517

12. Batteries fully charged

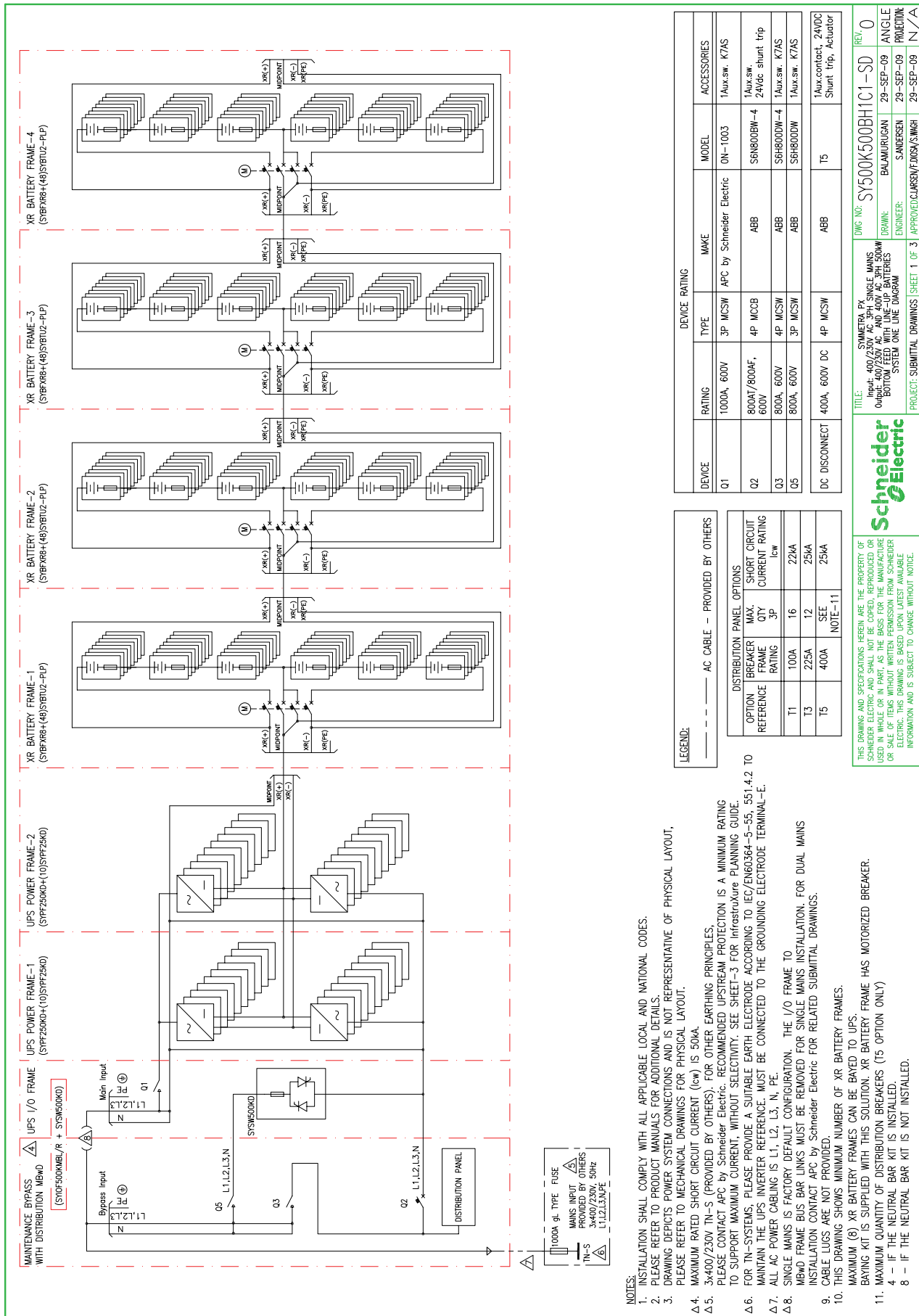
13. Batteries charging

Drawings

NOTE: A comprehensive set of drawings is available on the engineering website at engineer.apc.com.

NOTE: These drawings are for reference ONLY — subject to change without notice.

Symmetra PX 500 kW 400 V Single Utility/Mains with Maintenance Bypass and Line-Up-And-Match Batteries – Bottom Feed



DEVICE	RATING	TYPE	MAKE	MODEL	ACCESSORIES
Q1	1000A, 600V	3P MCCB	APC by Schneider Electric	ON-1003	1Aux.sw. K7AS
Q2	800A/800AF, 600V	4P MCCB	ABB	SAN800BW-4	1Aux.sw. 24Vdc shunt trip
Q3	800A, 600V	4P MCCB	ABB	SBH800DW-4	1Aux.sw. K7AS
Q5	800A, 600V	3P MCCB	ABB	SBH800DW	1Aux.sw. K7AS
DC DISCONNECT	400A, 600V DC	4P MCCB	ABB	T5	1Aux.contact, 24VDC Shunt trip, Actuator

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

DISTRIBUTION PANEL OPTIONS	OPTION REFERENCE	BREAKER FRAME RATING	MAX. QTY	SHORT CIRCUIT CURRENT RATING	
				3P	4P
T1	100A	16	22kA		
T3	225A	12	25kA		
T5	400A	SEE NOTE-11			

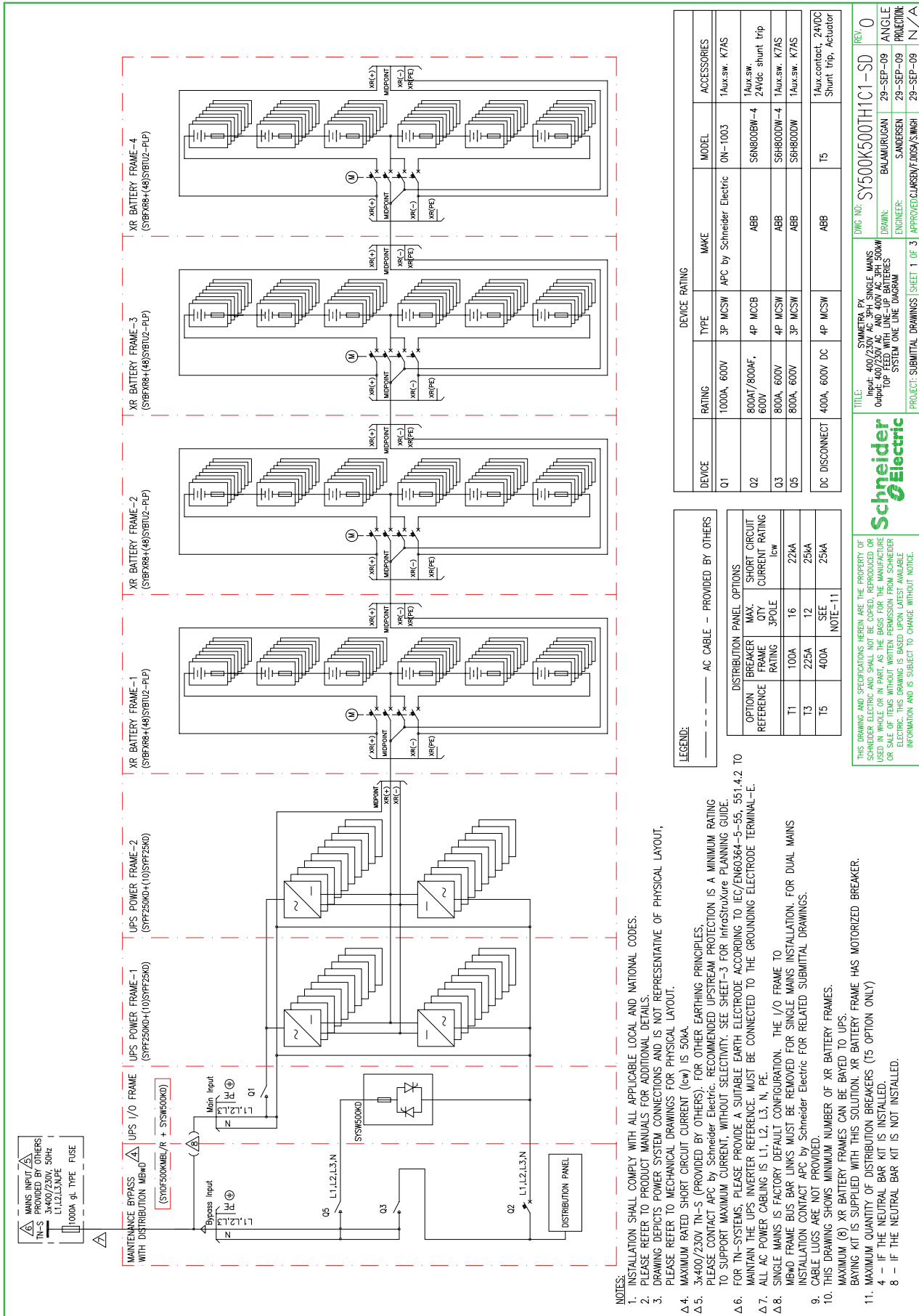
Schneider Electric

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

DWG NO: SY500K500BH1C1-SD REV: 0
 DRAWN: BALAMURUGAN 29-SEP-09 ANGLE
 ENGINEER: SANDERSEN 29-SEP-09 PROJECTION
 PROJECT: SUBMITTAL DRAWINGS SHEET 1 OF 3 APPROVED: CLARSEN/EDSJA/SIMAH 29-SEP-09 N/A

- 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_{sc}) 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 Infrastructure PLANNING GUIDE.
 - FOR TN-S 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 CABLEING IS L1, L2, L3, N, PE.
 - SINGLE MAINS IS FACTORY DEFAULT CONFIGURATION. THE I/O FRAME TO MBD FRAME BUS BAR LINKS MUST BE REMOVED FOR SINGLE MAINS INSTALLATION, FOR DUAL MAINS INSTALLATION CONTACT APC BY Schneider Electric FOR RELATED SUBMITTAL DRAWINGS.
 - 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.

Symmetra PX 500 kW 400 V Single Utility/Mains with Maintenance Bypass and Line-Up-And-Match Batteries – Top Feed



DEVICE	RATING	TYPE	MAKE	MODEL	ACCESSORIES
Q1	1000A, 600V	3P MCCSW	APC by Schneider Electric	ON-1003	1Aux.sw. K7AS
Q2	800AT/800AF, 600V	4P MCCB	ABB	SH800BW-4	1Aux.sw. 24Vdc shunt trip
Q3	800A, 600V	4P MCCSW	ABB	SH800DW-4	1Aux.sw. K7AS
Q5	800A, 600V	4P MCCSW	ABB	SH800DW	1Aux.sw. K7AS
DC DISCONNECT	400A, 600V DC	4P MCCSW	ABB	T5	1Aux.contact, 24VDC Shunt trip, Actuator

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

OPTION REFERENCE	BREAKER RATING	MAX. 3-POLE	SHORT CIRCUIT QTY	CURRENT RATING Icw
T1	100A	16	16	22KA
T3	225A	12	12	25KA
T5	400A	SEE NOTE-11	SEE NOTE-11	25KA

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Schneider Electric

TITLE: SYMMETRA PX 500kW AC 3PHASE MAINS INPUT 400/230V AC 3PHASE MAINS TOP FEED WITH LINE-UP AND MATCH BATTERIES SYSTEM ONE LINE DIAGRAM

DWG NO: SY500K500TH1C1-SD

REV: 0

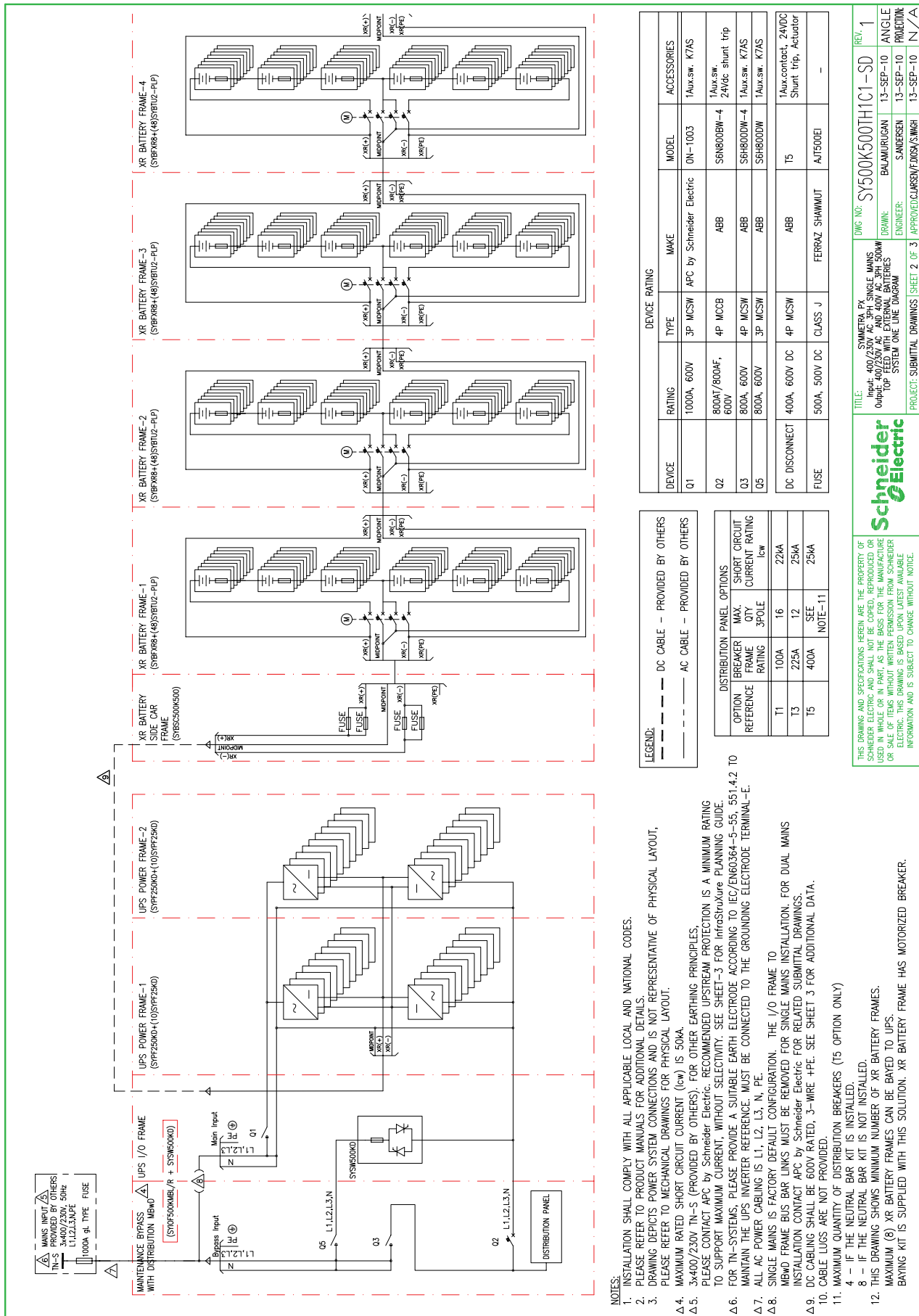
DRAWN: BALAMURUGAN 29-SEP-09

ENGINEER: SAMBERSEN 29-SEP-09

PROJECT: SUBMITTAL DRAWINGS SHEET 1 OF 3 APPROVED: JARSEN/PJOS/SJW/H

PROJECTION: N/A

Symmetra PX 500 kW 400 V Single Utility/Mains with Maintenance Bypass and Remote Batteries — Top Feed



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

DISTRIBUTION PANEL OPTIONS	
OPTION REFERENCE	BREAKER FRAME RATING
T1	100A
T3	225A
T5	400A

SHORT CIRCUIT CURRENT RATING Icw	MAX. QTY 3-POLE
22kA	16
25kA	12
25kA	SEE NOTE-11

DEVICE	RATING			DEVICE RATING		
	TYPE	MAKE	MODEL	TYPE	MAKE	MODEL
Q1	3P MCSW	ABB	3P MCSW APC by Schneider Electric	3P MCSW	ABB	3P MCSW APC by Schneider Electric
Q2	4P MCCB	ABB	800AT/800AF, 800A, 600V	4P MCCB	ABB	800AT/800AF, 800A, 600V
Q3	4P MCSW	ABB	800A, 600V	4P MCSW	ABB	800A, 600V
Q5	3P MCSW	ABB	800A, 600V	3P MCSW	ABB	800A, 600V
DC DISCONNECT	400A, 600V DC	ABB	400A, 600V DC	4P MCSW	FERRAZ SHAWMUT	400A, 600V DC
FUSE	500A, 500V DC	ABB	500A, 500V DC	CLASS J	FERRAZ SHAWMUT	500A, 500V DC
						15
						AUT500E1
						1aux.sw. K7AS
						1aux.sw. 24Vdc shunt trip
						1aux.sw. K7AS
						1aux.sw. K7AS
						1aux.contact, 24VDC Shunt trip, Actuator

- 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 (Icw) 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 INFRASTRUCTURE PLANNING GUIDE.
 - FOR TN-S 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 CABLEING 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 SINGLE MAINS INSTALLATION. FOR DUAL MAINS INSTALLATION CONTACT APC BY SCHNEIDER ELECTRIC FOR RELATED SUBMITTAL DRAWINGS.
 - DC CABLEING SHALL BE 600V RATED, 3-WIRE 4PE. SEE SHEET 3 FOR ADDITIONAL DATA.
 - CABLE LUGS ARE NOT PROVIDED.
 - MAXIMUM QUANTITY OF DISTRIBUTION BREAKERS (T5 OPTION ONLY)
 - 4 - IF THE NEUTRAL BAR KIT IS NOT INSTALLED.
 - 8 - IF THE NEUTRAL BAR KIT IS 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.

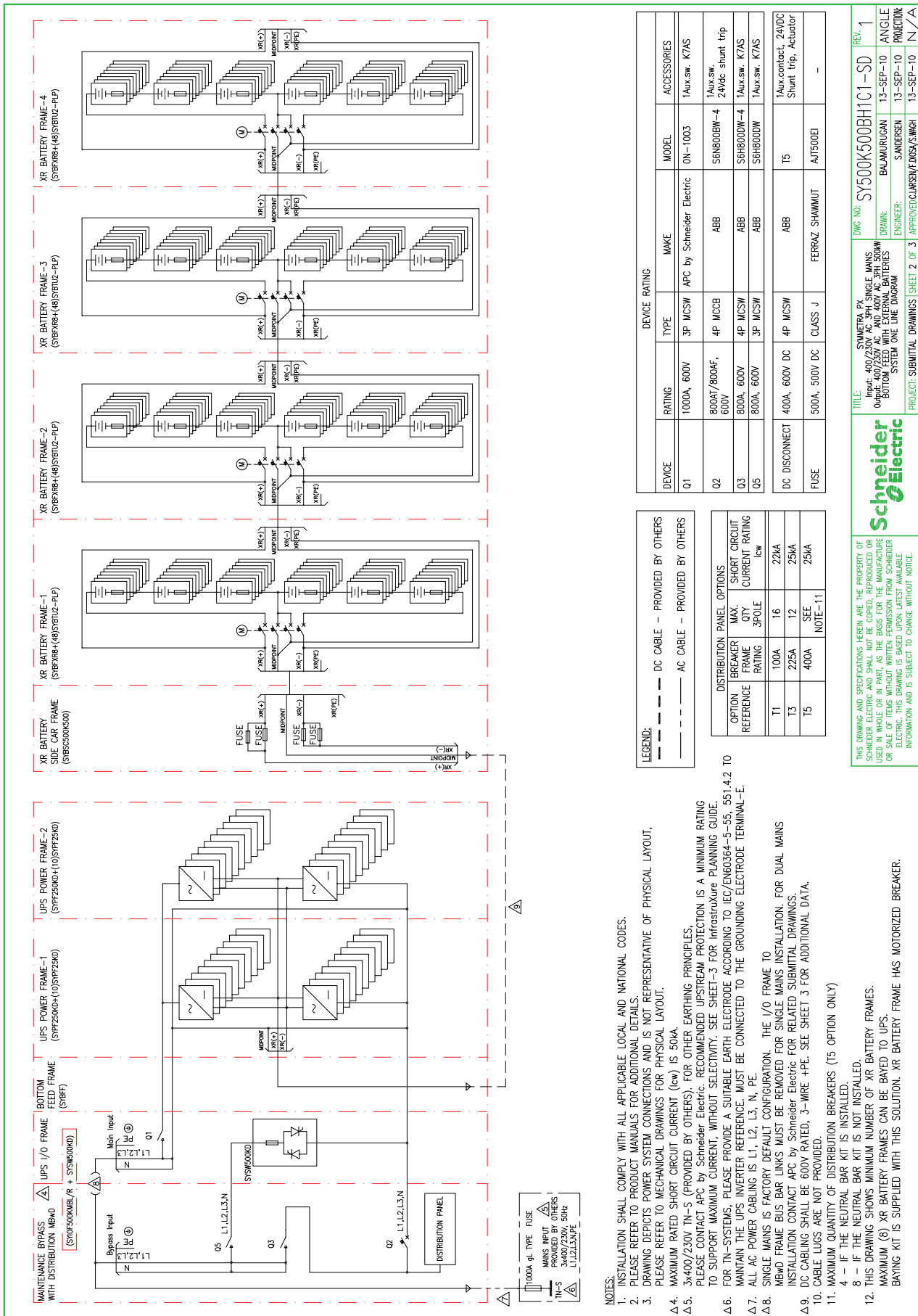
Schneider Electric

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

DWG NO: SY500K500TH1C1-SD REV. 1
 DRAWN: BALAMURUGAN
 ENGINEER: SANDERSEN
 PROJECT: SUBMITTAL DRAWINGS SHEET 2 OF 3 APPROVED: CLARSEN/F.DOSJA/S.MAH

NO.	DATE	DESCRIPTION
13-SEP-10		ANGLE PROJECTION
13-SEP-10		PROJECTION
13-SEP-10		N/A

Symmetra PX 500 kW 400 V Single Utility/Mains with Maintenance Bypass and Remote Batteries – Bottom Feed



DEVICE	RATING	TYPE	MAKE	MODEL	ACCESSORIES
Q1	1000A, 600V	3P MCSW	APC by Schneider Electric	0N-1003	1Aux.sw. K7AS
Q2	800A/800AF, 600V	4P MCCB	ABB	SN800BN-4	1Aux.sw. 24Vdc shunt trip
Q3	800A, 600V	4P MCSW	ABB	SB800DN-4	1Aux.sw. K7AS
Q5	800A, 600V	3P MCSW	ABB	SB800DN	1Aux.sw. K7AS
DC DISCONNECT	400A, 600V DC	4P MCSW	ABB	T5	1Aux.contact, 24VDC Shunt trip, Actuator
FUSE	500A, 500V DC	CLASS J	FERRAZ SHAWMUT	AJ1500E1	-

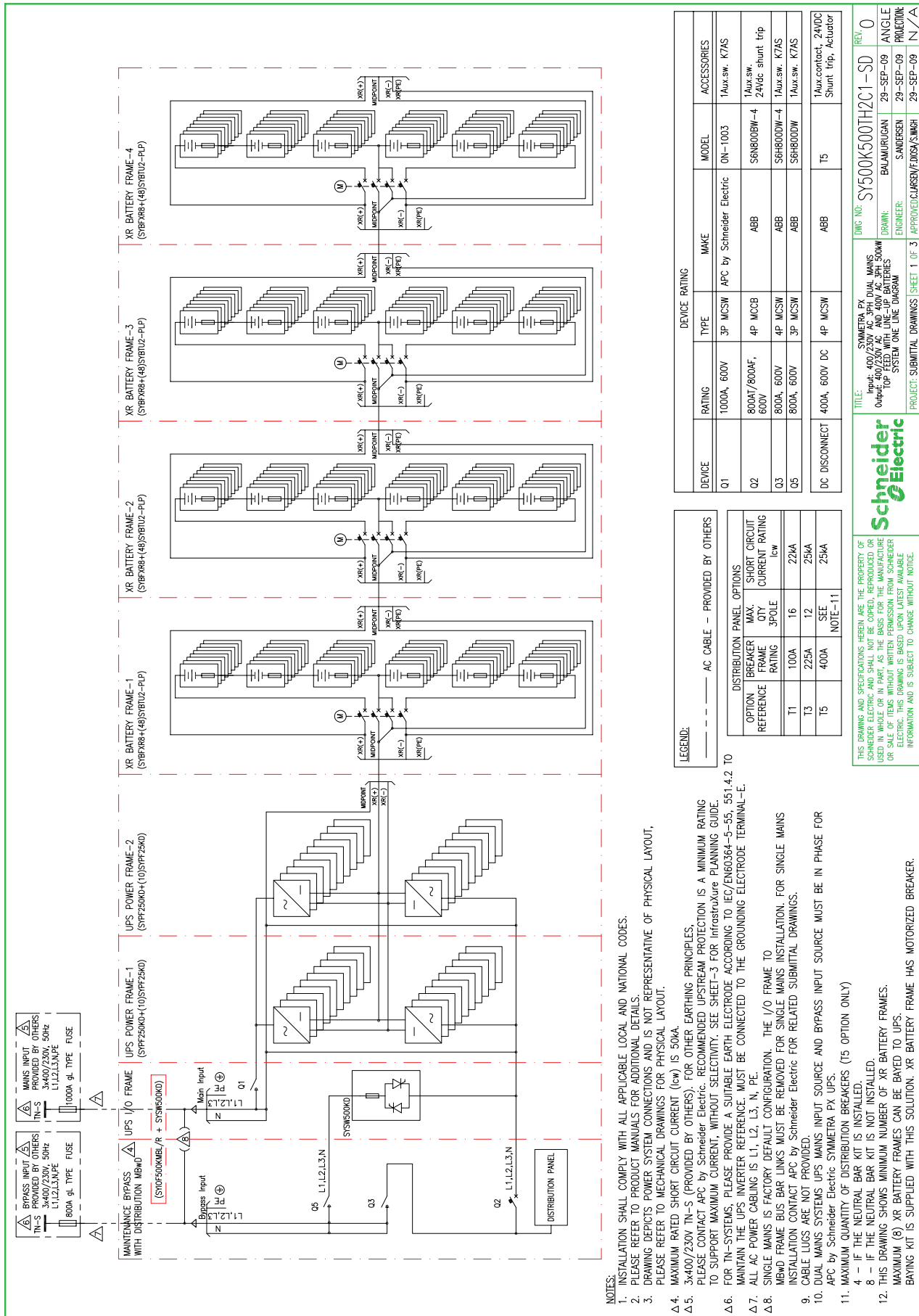
LEGEND:
 --- DC CABLE - PROVIDED BY OTHERS
 --- AC CABLE - PROVIDED BY OTHERS

DISTRIBUTION BREAKER FRAME REFERENCE	MAX. RATING	SHORT CIRCUIT QTY	PANEL OPTIONS
T1	100A	16	22KA
T3	225A	12	25KA
T5	400A	SEE NOTE-11	25KA

- NOTES:
1. INSTALLATION SHALL COMPLY WITH ALL APPLICABLE LOCAL AND NATIONAL CODES.
 2. PLEASE REFER TO PRODUCT MANUALS FOR ADDITIONAL DETAILS.
 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 (Icw) 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 INFRASTRUCTURE PLANNING GUIDE.
 6. FOR TN-S 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 CABLEING IS L1, L2, L3, N, PE.
 8. SINGLE MAINS IS FACTORY DEFAULT CONFIGURATION. THE /O FRAME TO MEND FRAME BUS BAR LINKS MUST BE REMOVED FOR SINGLE MAINS INSTALLATION. FOR DUAL MAINS INSTALLATION CONTACT APC BY SCHNEIDER ELECTRIC FOR RELATED SUBMITTAL DRAWINGS.
 9. DC CABLEING SHALL BE 600V RATED, 3-WIRE 4PE. 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.

TITLE: SYMMETRA PX 500kW 400V SINGLE MAINS WITH MAINTENANCE BYPASS AND REMOTE BATTERIES BOTTOM FEED WITH EXTERNAL BATTERIES SYSTEM ONE LINE DIAGRAM
 DWG NO: SY500K500BH1C1-SD
 DRAWN: BALAMURUGAN
 ENGINEER: SWANBERSEN
 PROJECT: SUBMITTAL DRAWINGS SHEET 2 OF 3 APPROVED: CLARENCE PERKINS/SWJAH
 REV. 1
 ANGLE
 PROJECTION
 N/A

Symmetra PX 500 kW 400 V Dual Mains with Maintenance Bypass and Line-Up-And-Match Batteries – Top Feed



TITLE: SYMMETRA PX
 Input: 400/230V AC, 3PH DUAL MAINS
 Output: 400/230V AC AND 400V AC, 3PH 500kW
 TOP FEED WITH LINE-UP BATTERIES
 SYSTEM ONE LINE DIAGRAM

PROJECT: SUBMITTAL DRAWINGS SHEET 1 OF 3 APPROVED: CLARSEN/DENGA/SIMAH

REV. 0

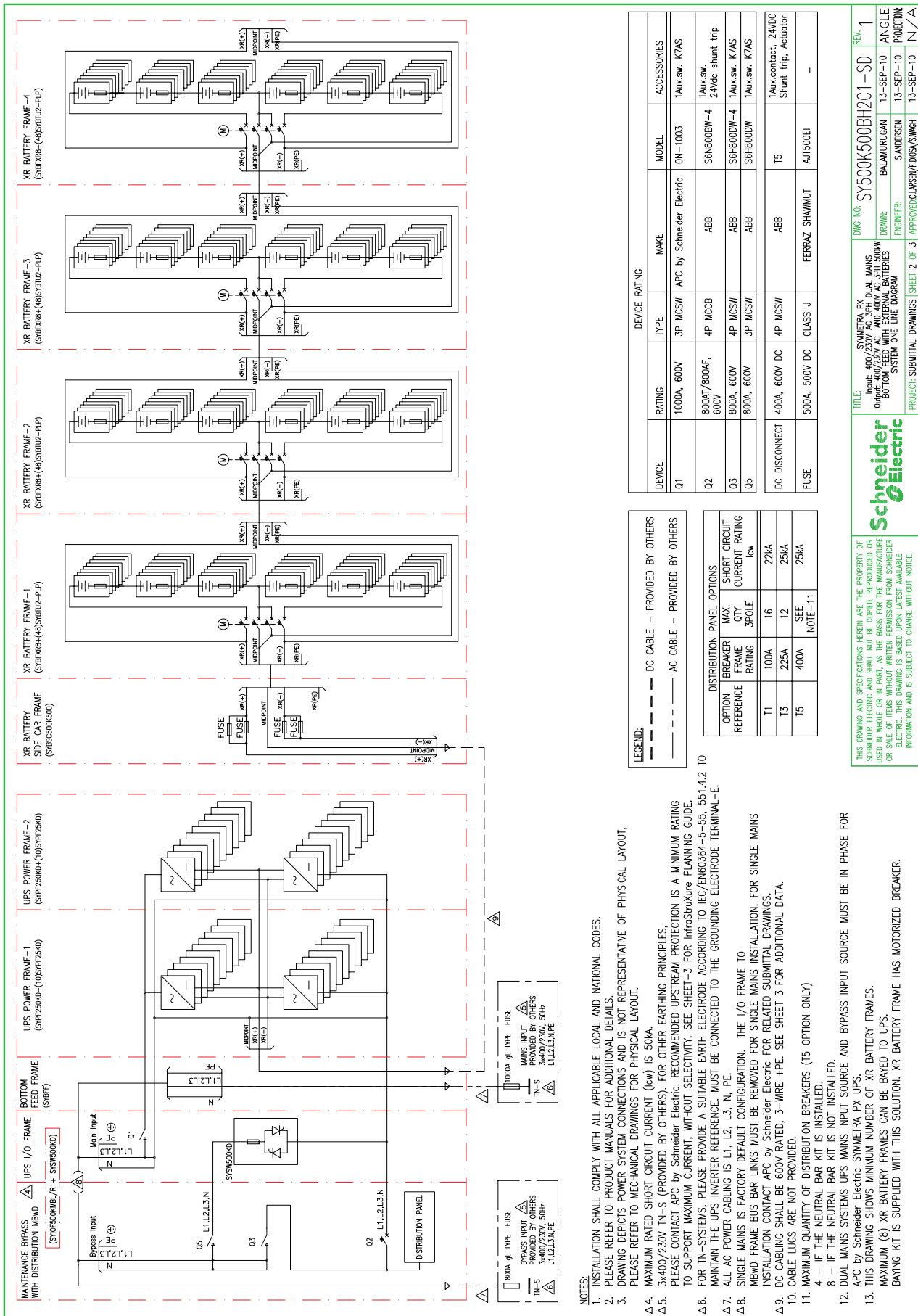
DRAWN: BALAMURUGAN 29-SEP-09 ANGLE
 ENGINEER: SANDERSEN 29-SEP-09 PROTECTION
 APPROVED: CLARSEN/DENGA/SIMAH 29-SEP-09 N/A

Schneider Electric

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- NOTES:**
1. INSTALLATION SHALL COMPLY WITH ALL APPLICABLE LOCAL AND NATIONAL CODES.
 2. PLEASE REFER TO PRODUCT MANUALS FOR ADDITIONAL DETAILS.
 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 (Icw) 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 INFRASTRUCTURE PLANNING GUIDE.
 6. FOR TN-S 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 CABLEING IS L1, L2, L3, N, PE.
 8. SINGLE MAINS IS FACTORY DEFAULT CONFIGURATION. THE I/O FRAME TO MBRND FRAME BUS BAR LINKS MUST BE REMOVED FOR SINGLE MAINS INSTALLATION. FOR SINGLE MAINS INSTALLATION CONTACT APC by Schneider Electric FOR RELATED SUBMITTAL DRAWINGS.
 9. CABLE LUGS ARE NOT PROVIDED.
 10. DUAL MAINS SYSTEMS UPS MAINS INPUT SOURCE AND BYPASS INPUT SOURCE MUST BE IN PHASE FOR APC by Schneider Electric SYMMETRA PX UPS.
 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 (6) XR BATTERY FRAMES CAN BE BAYED TO UPS.
 BAYING KIT IS SUPPLIED WITH THIS SOLUTION. XR BATTERY FRAME HAS MOTORIZED BREAKER.

Symmetra PX 500 kW 400 V Dual Utility/Mains with Maintenance Bypass and Remote Batteries – Bottom Feed



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

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

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	SB600BW-4	1Aux.sw. 24Vdc shunt trip
Q3	800A, 600V	4P MCSW	ABB	SB600DW-4	1Aux.sw. K7AS
Q5	800A, 600V	3P MCSW	ABB	SB600DW	1Aux.sw. K7AS
DC DISCONNECT	400A, 600V DC	4P MCSW	ABB	T5	1Aux.contact, 24VDC Shunt trip, Actuator
FUSE	500A, 500V DC	CLASS J	FERRAZ SHAWMUT	AJT500E1	-

- 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 (Icw) 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 INFRASTRUCTURE 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 CABLES (L1, L2, L3, N, PE)
 - SINGLE MAINS IS FACTORY DEFAULT CONFIGURATION. THE I/O FRAME TO MBRD FRAME BUS BAR LINKS MUST BE REMOVED FOR SINGLE MAINS INSTALLATION. FOR SINGLE MAINS INSTALLATION CONTACT APC BY SCHNEIDER ELECTRIC FOR RELATED SUBMITTAL DRAWINGS.
 - DC CABLE LUGS ARE NOT PROVIDED.
 - 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.
 - DUAL MAINS SYSTEM UPS MAINS INPUT SOURCE AND BYPASS INPUT SOURCE MUST BE IN PHASE FOR APC BY SCHNEIDER ELECTRIC SYMMETRA PX UPS.
 - 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.

Schneider Electric

TITLE: SYMMETRA PX DUAL MAINS INPUT 3x400/230V AC 500kW 400V DC 250/500kW BOTTOM FEED WITH EXTERNAL BATTERIES SYSTEM ONE LINE DIAGRAM

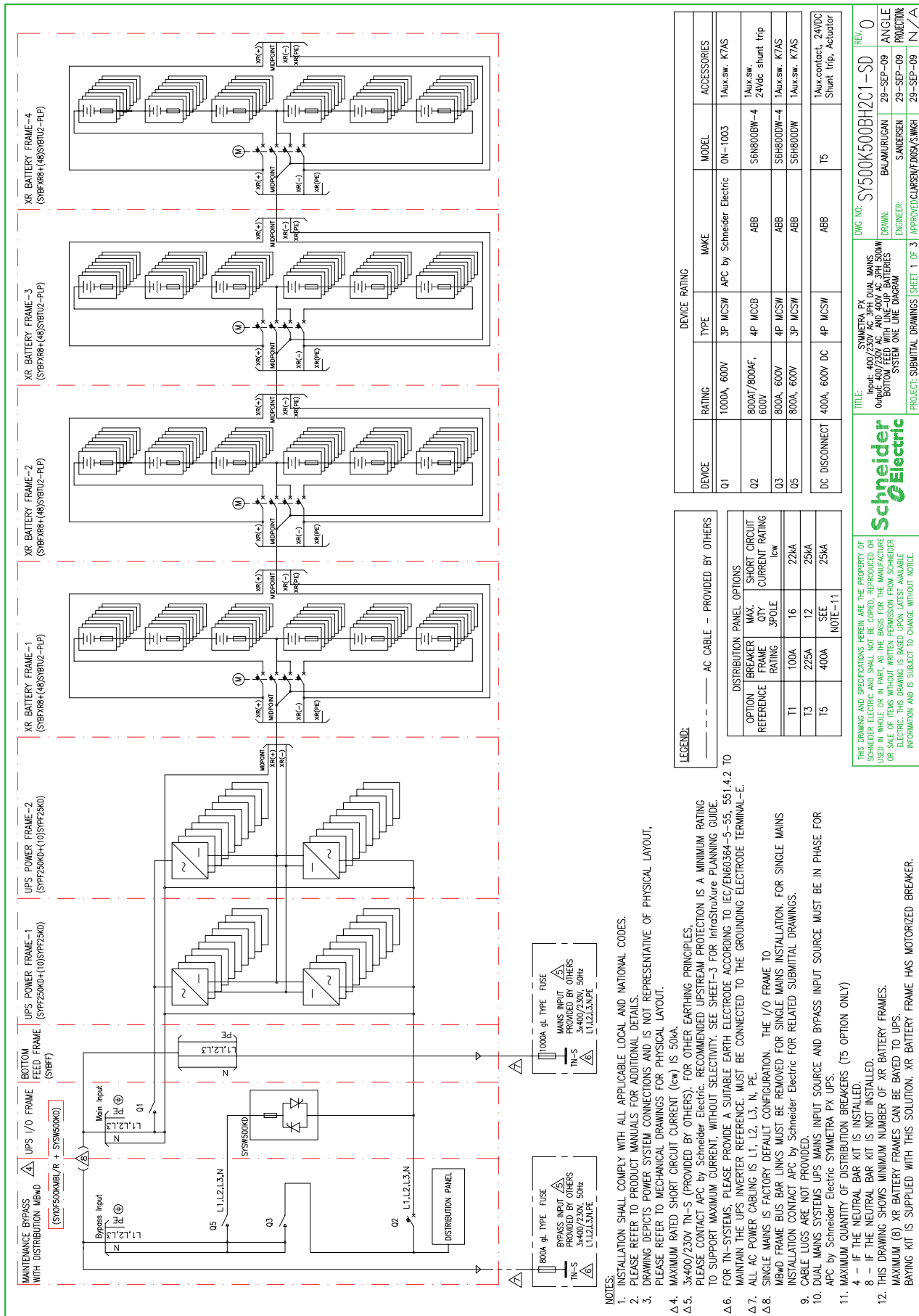
PROJECT: SUBMITTAL DRAWINGS | SHEET 2 OF 3 | APPROVED: J. ARSENEV, P. J. SWAN

DWG NO: SY500K500BH2C1-SD

REV: 1

ANGLE PROTECTION	13-SEP-10
PROTECTION	13-SEP-10

Symmetra PX 500 kW 400 V Dual Utility/Mains with Maintenance Bypass and Line-Up-And-Match Batteries – Bottom Feed



XR BATTERY FRAME-4
(SYBFXR8+)(48)SYBTU2-PLP

XR BATTERY FRAME-3
(SYBFXR8+)(48)SYBTU2-PLP

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

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

UPS POWER FRAME-2
(SYPF250K0+)(10)SYPF25K0

UPS POWER FRAME-1
(SYPF250K0+)(10)SYPF25K0

BOTTOM FEED FRAME
(SYBF)

UPS I/O FRAME
(SYUFS00K0B/R + SYUFS00K0)

MAINTENANCE BYPASS WITH DISTRIBUTION MIND

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

LEGEND: ——— AC CABLE — PROVIDED BY OTHERS

DISTRIBUTION PANEL OPTION	BREAKER FRAME RATING	MAX. QTY 3-POLE	SHORT CIRCUIT CURRENT RATING Icw
T1	100A	16	22kA
T3	225A	12	25kA
T5	400A	SEE NOTE-11	25kA

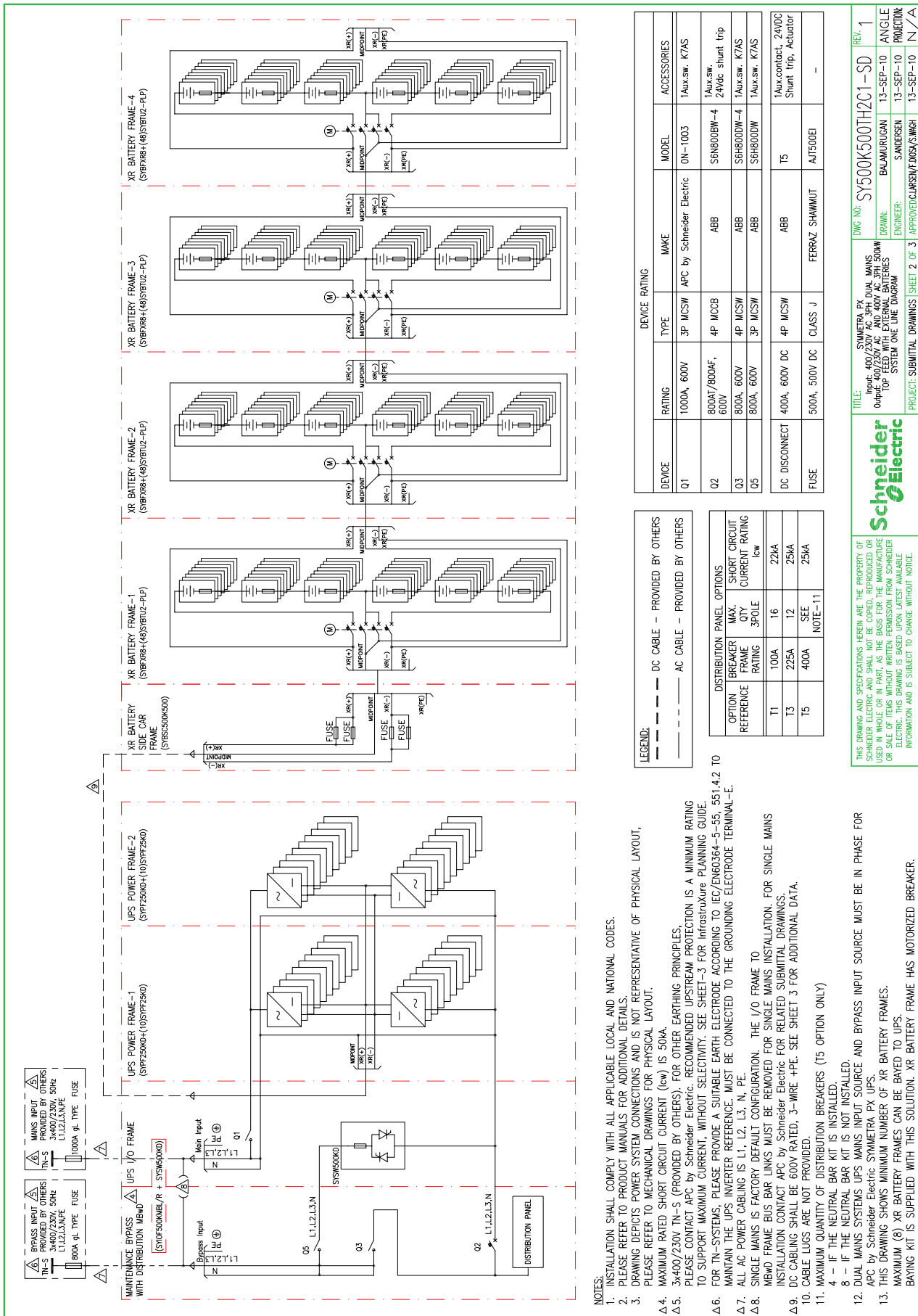
Schneider Electric

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

DWG NO: SY500K500BH2C1-SD REV: 0
 DRAWN: BALAMURUGAN 29-SEP-09 ANGLE
 ENGINEER: SANDERSEN 29-SEP-09 PROTECTION
 PROJECT: SUBMITTAL DRAWINGS SHEET 1 OF 3 APPROVED: CLARSEN/EDS/SIMAH 29-SEP-09 N/A

- 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 (Icw) 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 INFRASTRUCTURE 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 CABLEING IS L1, L2, L3, N, PE.
 - SINGLE MAINS IS FACTORY DEFAULT CONFIGURATION. THE I/O FRAME TO MIND FRAME BUS LINKS MUST BE REMOVED FOR SINGLE MAINS INSTALLATION. FOR SINGLE MAINS INSTALLATION CONTACT APC BY Schneider Electric FOR RELATED SUBMITTAL DRAWINGS.
 - CABLE LUGS ARE NOT PROVIDED.
 - DUAL MAINS SYSTEMS UPS MAINS INPUT SOURCE AND BYPASS INPUT SOURCE MUST BE IN PHASE FOR APC BY Schneider Electric SYMMETRA PX UPS.
 - 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.

Symmetra PX 500 kW 400 V Dual Utility/Mains with Maintenance Bypass and Remote Batteries – Top Feed



REV. 1

PROJECT: SUBMITTAL DRAWINGS | SHEET 2 OF 3 | APPROVED: J. CLARK, P. BROWN, S. WISNIEWSKI

ENGINEER: S. WISNIEWSKI

DRAWN: BALAJIRUGAN

DATE: 13-SEP-10

ANGLE: 13-SEP-10

PROJECTION: N/A

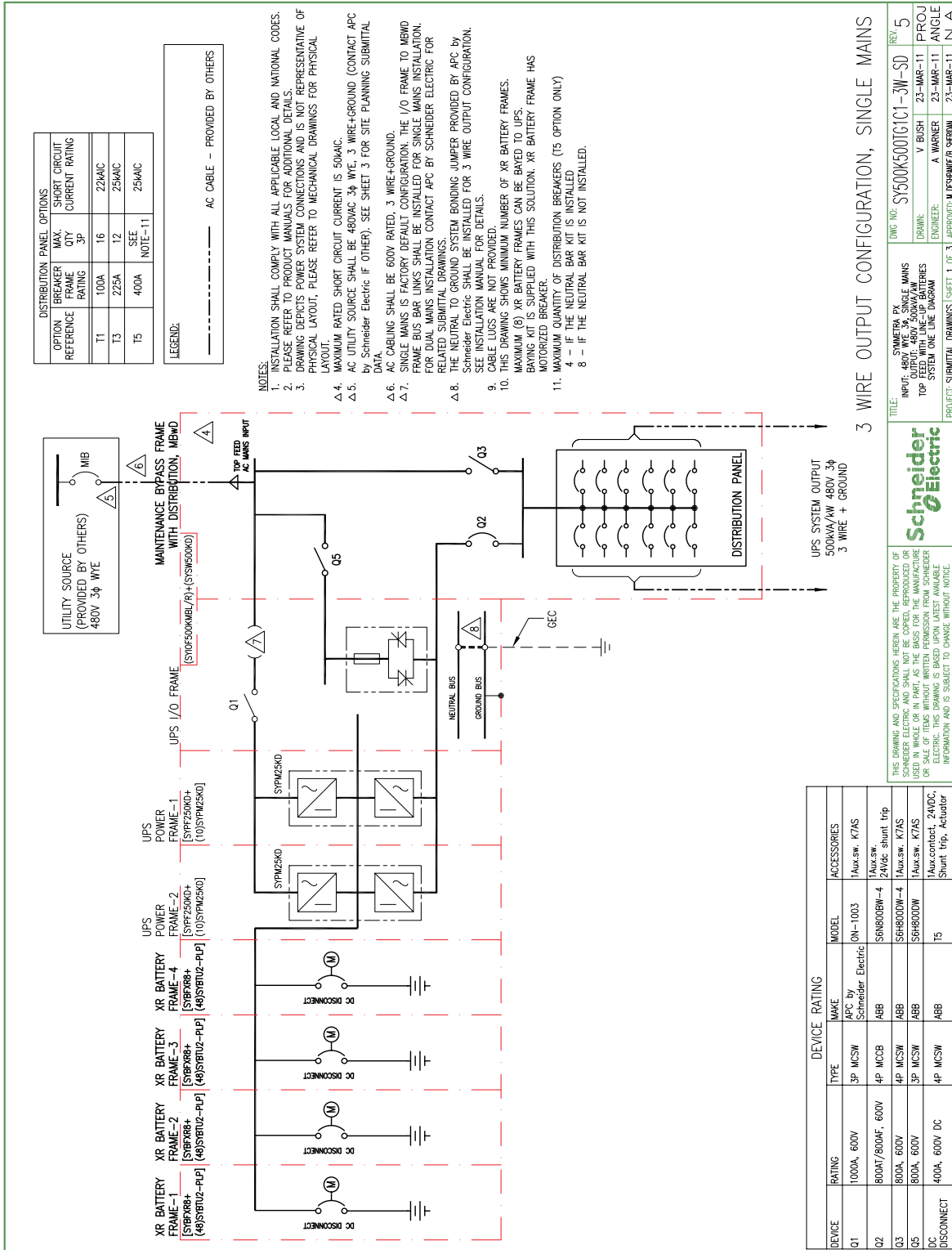
DMG NO: SY500K500TH2C1-SD

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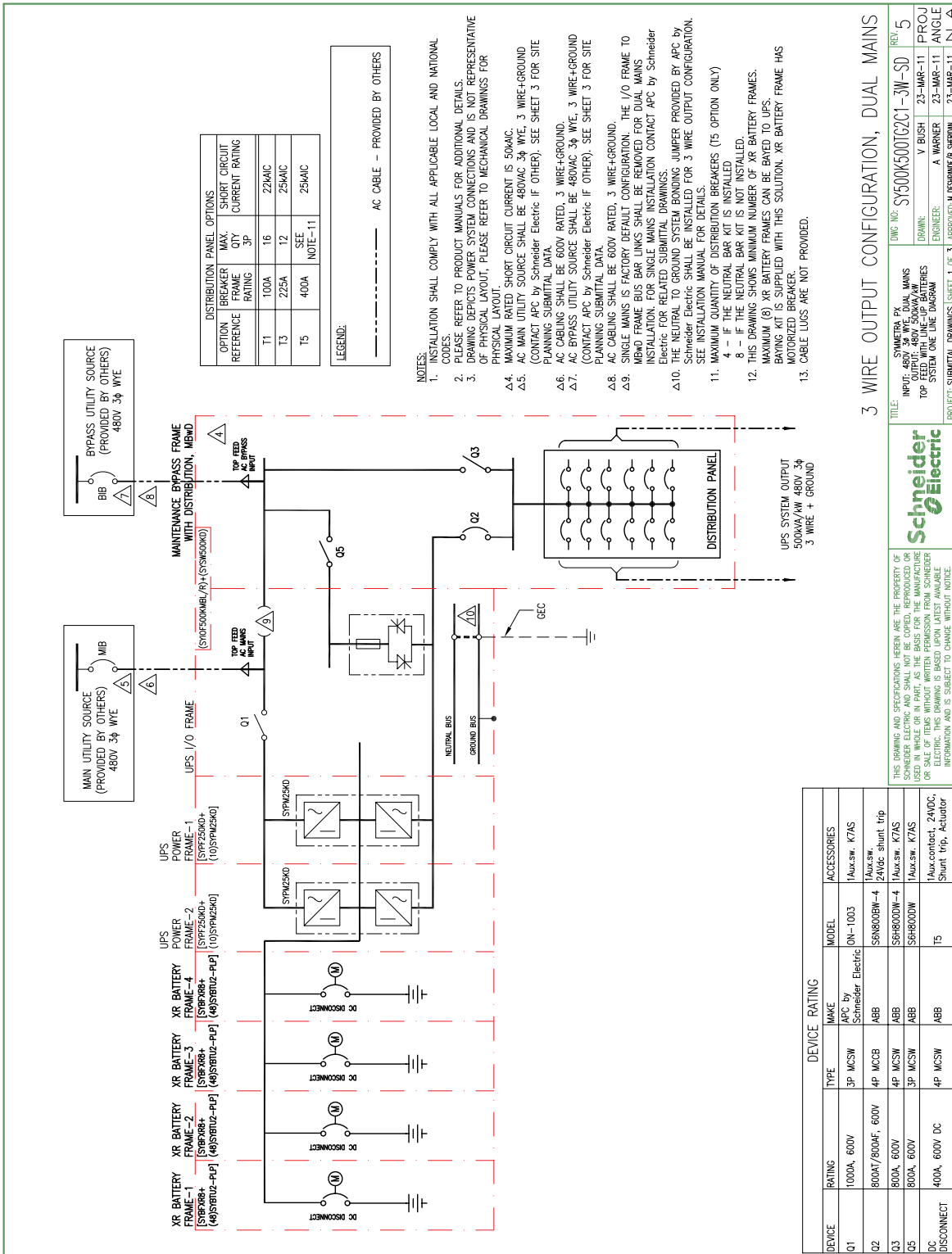
Schneider Electric

- 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 (Icw) 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 INFRASTRUCTURE PLANNING GUIDE.
 - FOR TN-S 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 CABLEING IS L1, L2, L3, N, PE.
 - SINGLE MAINS IS FACTORY DEFAULT CONFIGURATION. THE I/O FRAME TO MWDW FRAME BUS BAR LINKS MUST BE REMOVED FOR SINGLE MAINS INSTALLATION. FOR SINGLE MAINS INSTALLATION CONTACT APC BY SCHNEIDER ELECTRIC FOR RELATED SUBMITTAL DRAWINGS.
 - DC CABLEING SHALL BE 600V RATED, 3-WIRE +PE. SEE SHEET 3 FOR ADDITIONAL DATA.
 - CABLE LUGS ARE NOT PROVIDED.
 - 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.
 - DUAL MAINS SYSTEMS UPS MAINS INPUT SOURCE AND BYPASS INPUT SOURCE MUST BE IN PHASE FOR APC BY SCHNEIDER ELECTRIC SYMMETRA PX UPS.
 - 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.

Symmetra PX 500 kW 480 V Single Mains with Maintenance Bypass (3 Wire Output) and Line-Up-And-Match Batteries – Top Feed



Symmetra PX 500 kW 480 V Dual Mains with Maintenance Bypass (3 Wire Output) and Line-Up-And-Match Batteries – Top Feed



3 WIRE OUTPUT CONFIGURATION, DUAL MAINS

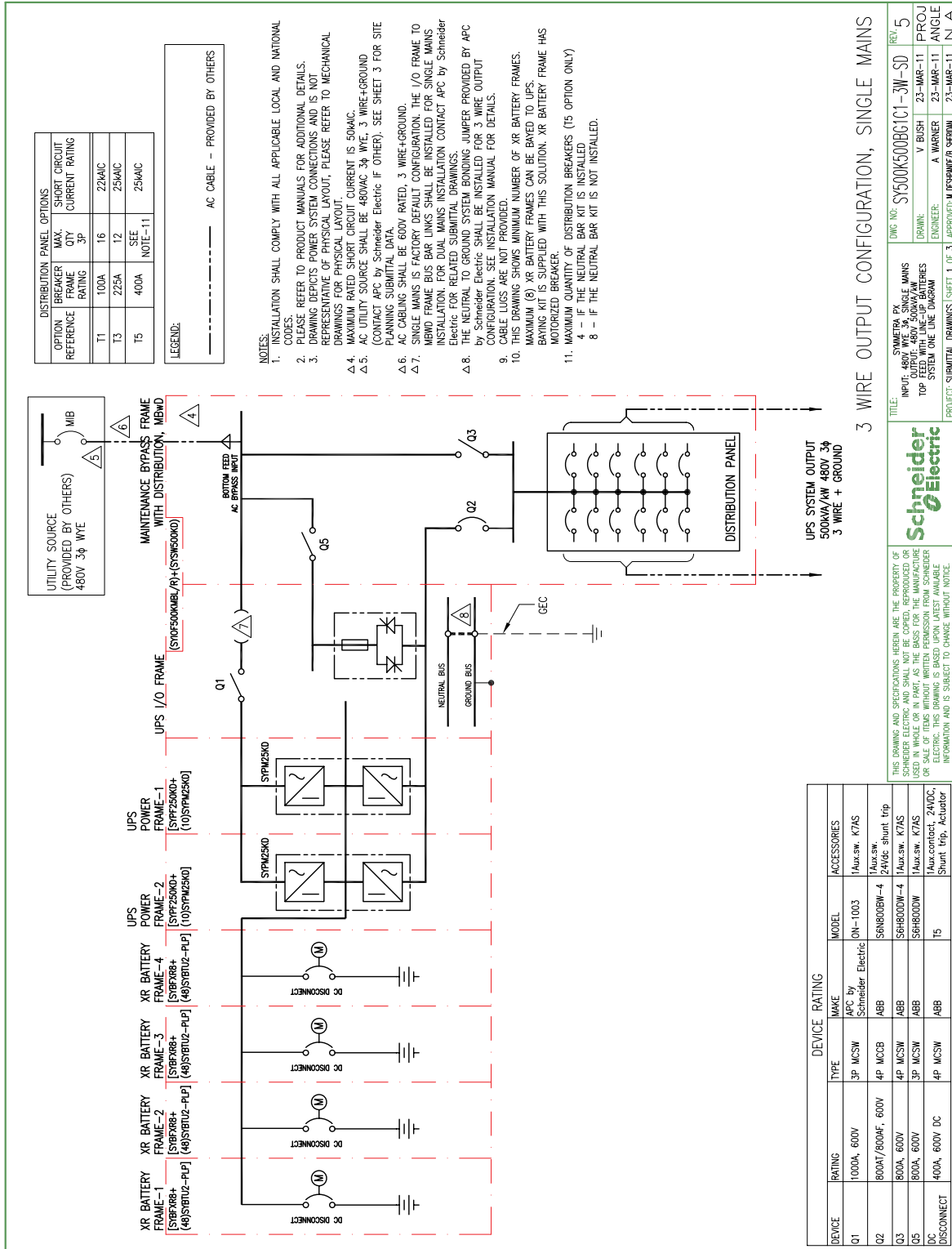
TITLE: SYMMETRA PX BY 500kW/500TGC1-3W-SD REV 5
 INPUT: 480V 3Ø WYE DUAL MAINS
 OUTPUT: 480V 500kVA/3W
 TOP SYSTEM ONE LINE DIAGRAM
 DWS NO: 25-MAR-11
 V BUSH 25-MAR-11
 A WARNER 25-MAR-11
 APPROVED: M DESHAIW/B SHERMAN 25-MAR-11
 PROJECT: SUBMITTAL DRAWINGS SHEET 1 OF 3



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DEVICE	RATING	TYPE	MAKE	MODEL	ACCESSORIES
Q1	1000A, 600V	3P MCSW	APC by Schneider Electric	ON-1003	1Aux.sw. K7AS
Q2	800A/800AF, 600V	4P MCCB	ABB	SEN800BW-4	1Aux.sw. 24Vdc shunt trip
Q3	800A, 600V	4P MCSW	ABB	SBH800BW-4	1Aux.sw. K7AS
Q5	800A, 600V	3P MCSW	ABB	SBH800BW	1Aux.sw. K7AS
DC DISCONNECT	400A, 600V DC	4P MCSW	ABB	TS	1Aux.contact, 24VDC, Shunt trip, Actuator

Symmetra PX 500 kW 480 V Single Mains with Maintenance Bypass (3 Wire Output) and Line-Up-And-Match Batteries – Bottom Feed



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

LEGEND:
 — AC CABLE — PROVIDED BY OTHERS

- NOTES:
1. INSTALLATION SHALL COMPLY WITH ALL APPLICABLE LOCAL AND NATIONAL CODES.
 2. PLEASE REFER TO PRODUCT MANUALS FOR ADDITIONAL DETAILS.
 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 IS 50kAIC.
 5. 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.
 6. AC CABLELING SHALL BE 600V RATED, 3 WIRE+GROUND.
 7. SINGLE MAINS IS FACTORY DEFAULT CONFIGURATION. THE I/O FRAME TO MEND FRAME BUS BAR LINKS SHALL BE INSTALLED FOR SINGLE MAINS INSTALLATION. FOR DUAL MAINS INSTALLATION CONTACT APC BY Schneider Electric FOR RELATED SUBMITTAL DRAWINGS.
 8. 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.
 9. CABLE LUGS ARE NOT PROVIDED.
 10. 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.
 11. MAXIMUM QUANTITY OF DISTRIBUTION BREAKERS (15 OPTION ONLY) 4 – IF THE NEUTRAL BAR KIT IS INSTALLED
 8 – IF THE NEUTRAL BAR KIT IS NOT INSTALLED.

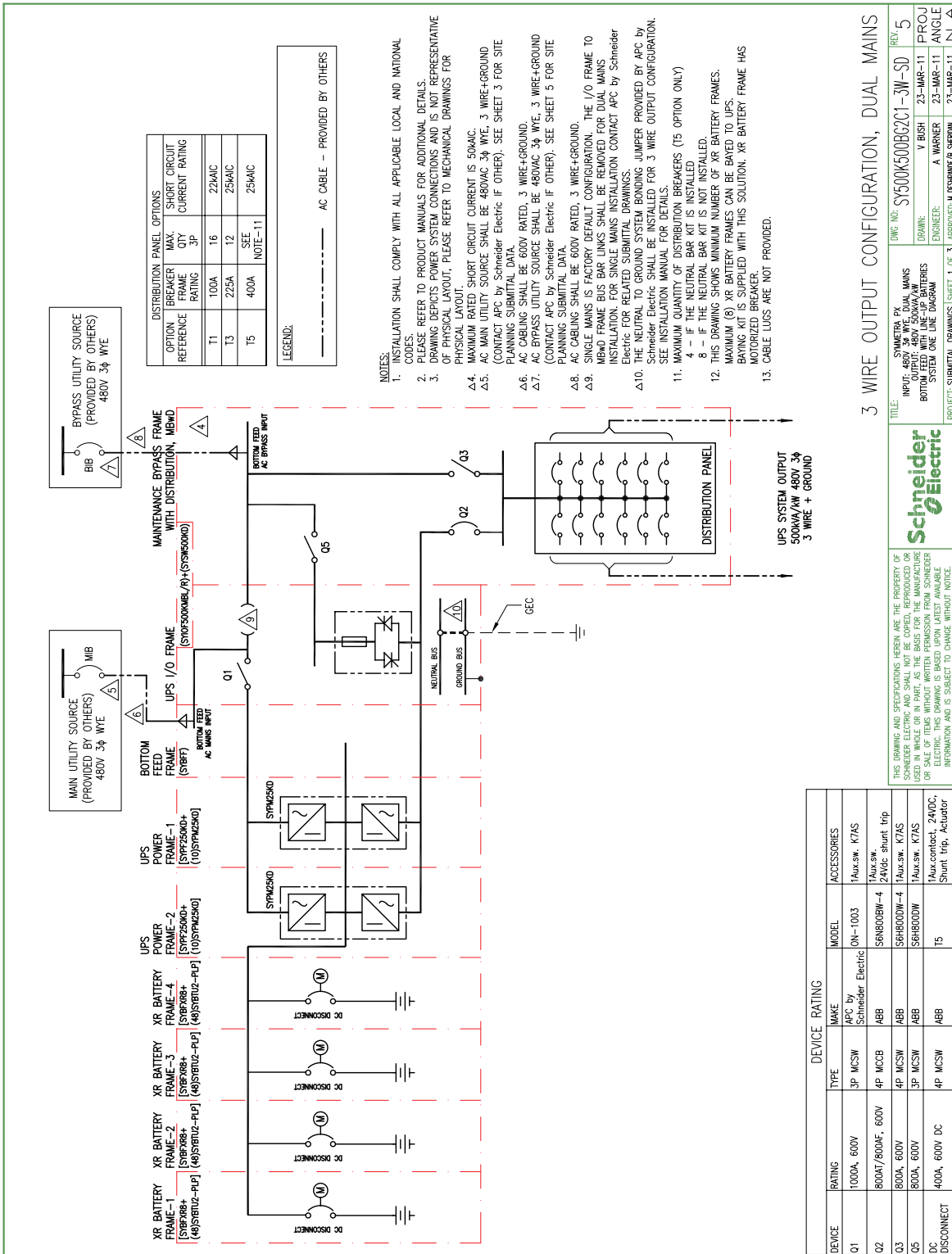
DEVICE RATING		
DEVICE	RATING	ACCESSORIES
Q1	1000A, 600V	APC by Schneider Electric ON-1003
Q2	800A/800V, 600V	Aux.sw. K7AS
Q3	800A/800V, 600V	SE6800EW-4 24VDC shunt trip
Q5	800A, 600V	Aux.sw. K7AS
DC DISCONNECT	400A, 600V DC	Aux.contact, 24VDC, Shunt trip, Actuator

3 WIRE OUTPUT CONFIGURATION, SINGLE MAINS

TITLE: SYMMETRA PX 500kW/4W 480V 3φ SINGLE MAINS TOP FEED WITH LINE-UP BATTERIES SYSTEM ONE LINE DIAGRAM
 PROJECT: SUBMITTAL DRAWINGS SHEET 1 OF 3 APPROVED: M DESHAI/EB SEBDM
 DWG NO: SY500K480BG1C1-3W-SD REV. 5
 DRAWN: V BUSH 23-MAR-11 PROJ
 ENGINEER: A WARNER 23-MAR-11 ANGLE
 23-MAR-11 N.A.

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Symmetra PX 500 kW 480 V Dual Mains with Maintenance Bypass (3 Wire Output) and Line-Up-And-Match Batteries – Bottom Feed



3 WIRE OUTPUT CONFIGURATION, DUAL MAINS

SYMMETRA BY: SY500K500B6GZC1-3W-SD REV: 5
 INPUT: 480V 3φ WYE DUAL MAINS
 OUTPUT: 480V 500kVA/480V 3 WIRE + GROUND
 BOTTOM FEED SYSTEM ONE LINE DIAGRAM

FRANK: Y BUSH 23-MAR-11
 ENGINEER: A WARNER 23-MAR-11
 PROJECT: SUBMITTAL DRAWINGS SHEET 1 OF 3 APPROVED: M DESHPANDE/SHEWAN 23-MAR-11

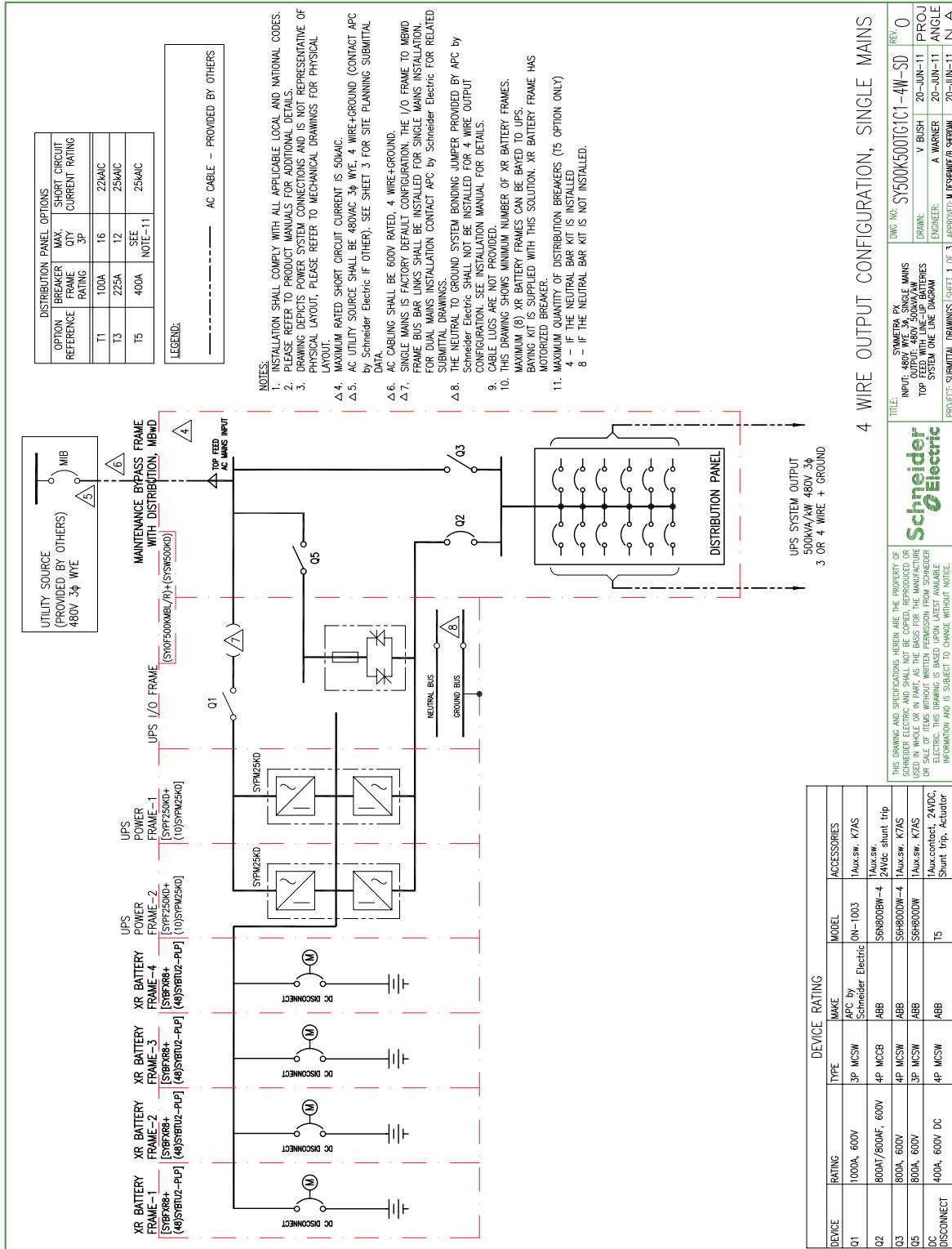


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DEVICE RATING			
DEVICE	RATING	TYPE	MAKE
01	1000A, 600V	3P MCSW	APC by Schneider Electric
02	800A/800A, 600V	4P MCCB	ABB
03	800A, 600V	4P MCSW	ABB
05	800A, 600V	3P MCSW	ABB
DC DISCONNECT	400A, 600V DC	4P MCSW	ABB

ACCESSORIES			
MODEL	MAKE	TYPE	ACCESSORIES
OM-1003	Schneider Electric	1Aux.sw. K7AS	1Aux.sw. K7AS
SRN800BW-4	ABB	24Vdc shunt trip	24Vdc shunt trip
SRH800DW-4	ABB	1Aux.sw. K7AS	1Aux.sw. K7AS
SRH800DW	ABB	1Aux.sw. K7AS	1Aux.sw. K7AS
T5	ABB	Shunt trip, Actuator	Shunt trip, Actuator

Symmetra PX 500 kW 480 V Single Mains with Maintenance Bypass (4 Wire Output) and Line-Up-And-Match Batteries – Top Feed



DISTRIBUTION PANEL OPTIONS			
OPTION REFERENCE	BREAKER FRAME RATING	MAX. WYE 3P	SHORT CIRCUIT CURRENT RATING
T1	100A	16	22kAIC
T3	225A	12	25kAIC
T5	400A	SEF	25kAIC

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

- NOTES:**
1. INSTALLATION SHALL COMPLY WITH ALL APPLICABLE LOCAL AND NATIONAL CODES. PLEASE REFER TO PRODUCT MANUALS FOR ADDITIONAL DETAILS.
 2. DRAWING DEPICTS POWER SYSTEM CONNECTIONS AND IS NOT REPRESENTATIVE OF PHYSICAL LAYOUT, PLEASE REFER TO MECHANICAL DRAWINGS FOR PHYSICAL LAYOUT.
 3. MAXIMUM RATED SHORT CIRCUIT CURRENT IS 50kAIC.
 4. AC UTILITY SOURCE SHALL BE 480VAC 3φ WYE, 4 WIRE+GROUND (CONTACT APC BY Schneider Electric IF OTHER). SEE SHEET 3 FOR SITE PLANNING SUBMITTAL DATA.
 5. AC CABLEING SHALL BE 600V RATED, 4 WIRE+GROUND.
 6. 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.
 7. THE NEUTRAL TO GROUND SYSTEM BONDING JUMPER PROVIDED BY APC BY Schneider Electric SHALL NOT BE INSTALLED FOR 4 WIRE OUTPUT CONFIGURATION. SEE INSTALLATION MANUAL FOR DETAILS.
 8. CABLE LUGS ARE NOT PROVIDED.
 9. THIS DRAWING SHOWS MINIMUM NUMBER OF XR BATTERY FRAMES. MAXIMUM (8) XR BATTERY FRAMES CAN BE BAYED TO UPS.
 10. BAYING KIT IS SUPPLIED WITH THIS SOLUTION. XR BATTERY FRAME HAS MOTORIZED BREAKER.
 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.

DEVICE RATING		DEVICE RATING		ACCESSORIES	
DEVICE	RATING	TYPE	MAKE	MODEL	ACCESSORIES
Q1	1000A, 600V	3P MCSW	UPC by Schneider Electric	DN-1003	Aux.sw. K7AS
Q2	800A/800MVA, 600V	4P MCCB	ABB	SN600BW-4	Aux.sw. 24Vdc shunt, trip
Q3	800A, 600V	4P MCSW	ABB	SN600BW-4	Aux.sw. K7AS
Q5	800A, 600V	3P MCSW	ABB	SN600BW	Aux.sw. K7AS
DC DISCONNECT	400A, 600V DC	4P MCSW	ABB	T5	Aux.contact, 24VDC, Shunt trip, Actuator

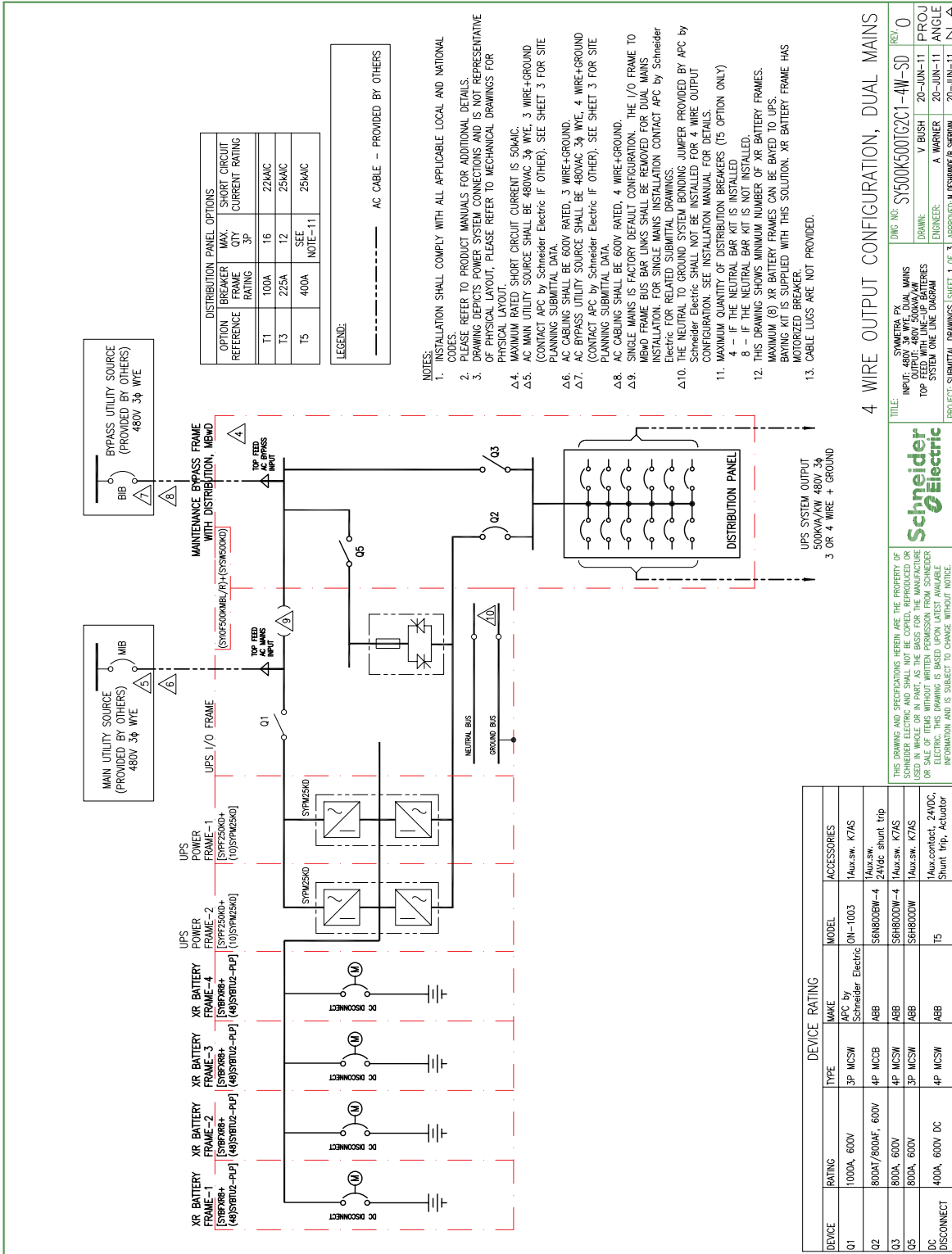
4 WIRE OUTPUT CONFIGURATION, SINGLE MAINS

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Schneider Electric

DWG NO: SY500K500TG1C1-4W-SD REV: 0
 DRAWN: V BUSH 20-JUN-11
 ENGINEER: A WARNER 20-JUN-11
 PROJECT: SUBMITTAL DRAWINGS SHEET 1 OF 3 APPROVED: M DESHAJEE/SERBIN 20-JUN-11
 TITLE: SYMMETRA PX 500kW 480V 3φ SINGLE MAINS TOP FEED WITH LINE-UP BATTERIES SYSTEM ONE LINE DIAGRAM
 PROJ ANGLE N.A.

Symmetra PX 500 kW 480 V Dual Mains with Maintenance Bypass (4 Wire Output) and Line-Up-And-Match Batteries – Top Feed



4 WIRE OUTPUT CONFIGURATION, DUAL MAINS

SYMMETRA PX
 TITLE: 480V 3Φ WYE DUAL MAINS
 INPUT: 480V 3Φ WYE DUAL MAINS
 OUTPUT: 480V 500kVA/4W
 TOP SYSTEM ONE LINE DIAGRAM

DWG. NO: SY500K600T62C1-4W-SD
 REV: 0

DESIGNED BY: V. BUSH
 CHECKED BY: A. WARNER
 APPROVED BY: M. DESHPANDE/S. SHERMAN

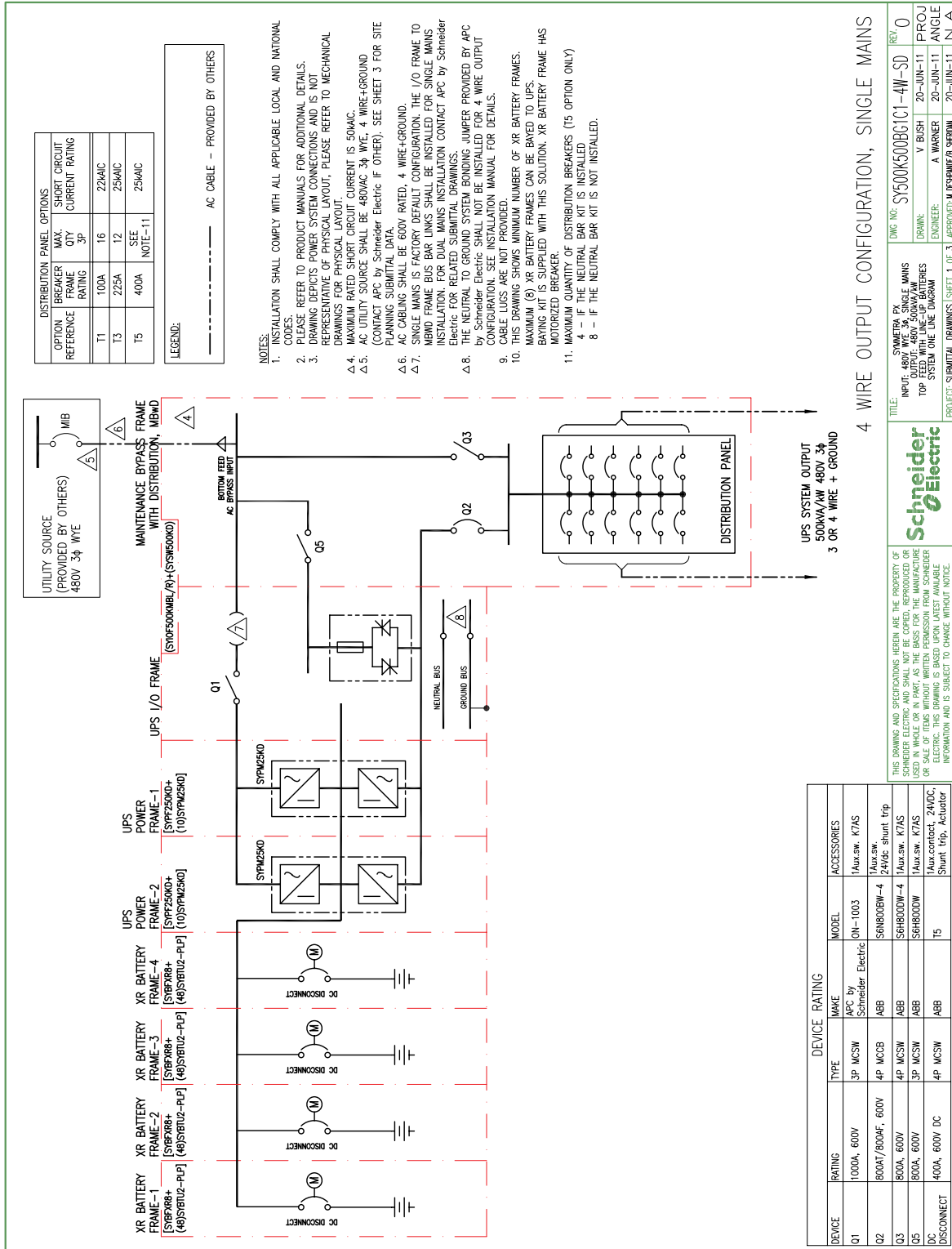
DATE: 20-JUN-11
 PROJECT: 20-JUN-11
 ANGLE: N/A

Schneider Electric

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DEVICE RATING		ACCESSORIES	
DEVICE	RATING	TYPE	MAKE
Q1	1000A, 600V	3P MCSW	APC by Schneider Electric
Q2	800A/800A ⁴ , 600V	4P MCCB	ABB
Q3	800A, 600V	4P MCSW	ABB
Q5	800A, 600V	3P MCSW	ABB
DC DISCONNECT	400A, 600V DC	4P MCSW	ABB

Symmetra PX 500 kW 480 V Single Mains with Maintenance Bypass (4 Wire Output) and Line-Up-And-Match Batteries – Bottom Feed



4 WIRE OUTPUT CONFIGURATION, SINGLE MAINS

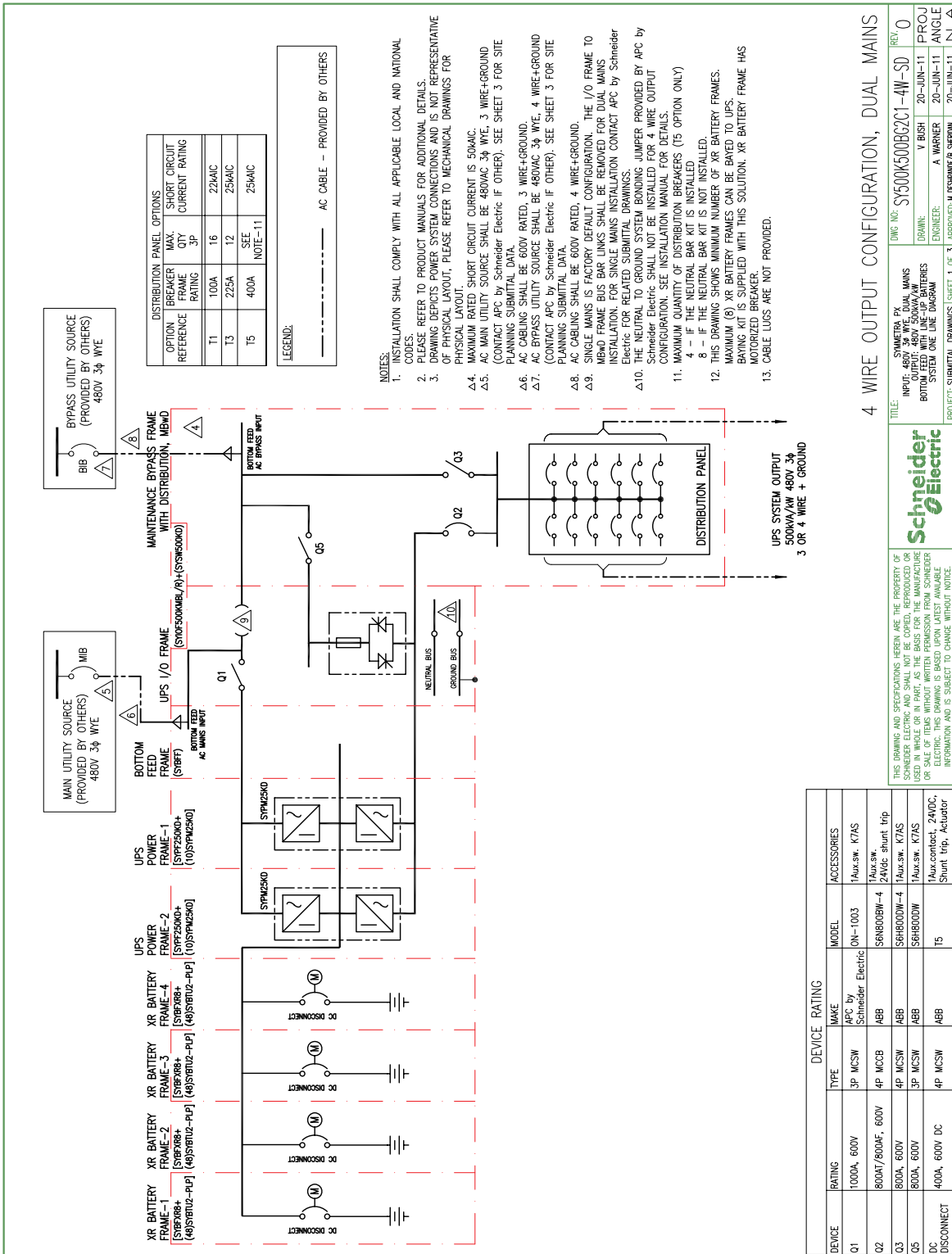
DWG NO:	SY500K500BG1C1-4W-SD	REV:	0
DRAWN:	V BUSH	20-JUN-11	PROJ
ENGINEER:	A WARNER	20-JUN-11	ANGLE
APPROVED:	M DESHANE/JS SERRIN	20-JUN-11	N.A.

TITLE: SYMMETRA PX 500kW/480V 3φ SINGLE MAINS TOP FEED WITH LINE-UP BATTERIES SYSTEM ONE LINE DIAGRAM
 PROJECT: SUBMITTAL DRAWINGS SHEET 1 OF 3 APPROVED: M DESHANE/JS SERRIN

DEVICE RATING			
DEVICE	RATING	TYPE	MAKE
Q1	1000A, 600V	3P MCB	APC by Schneider Electric
Q2	800A/600V, 600V	4P MCCB	ABB
Q3	800A/600V, 600V	4P MCCB	ABB
Q4	800A, 600V	3P MCB	ABB
Q5	800A, 600V	3P MCB	ABB
DC DISCONNECT	400A, 600V DC	4P MCB	ABB

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Symmetra PX 500 kW 480 V Dual Mains with Maintenance Bypass (4 Wire Output) and Line-Up-And-Match Batteries – Bottom Feed



4 WIRE OUTPUT CONFIGURATION, DUAL MAINS

TITLE: SYMMETRA PX 500kW/4W DUAL MAINS
 INPUT: 480V 3Φ WYE, 3 WIRE+GROUND
 OUTPUT: 480V 3Φ WYE, 4 WIRE+GROUND
 BOTTOM FEED AC MAINS INPUT SYSTEM ONE LINE DIAGRAM
 DWS NO: SY500K500B6ZC1-4W-SD REV: 0
 FRANK: Y BISH 20-JUN-11
 PROJ: I PROJ 20-JUN-11
 ANGLE: N, A
 ENGINEER: A WARNER 20-JUN-11
 APPROVED: M DESHPANDE/SHEWAN 20-JUN-11
 PROJECT: SUBMITTAL DRAWINGS SHEET 1 OF 3



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DEVICE RATING			
DEVICE	RATING	TYPE	MAKE
01	1000A, 600V	3P MCB	AFC by Schneider Electric
02	800A/800AF, 600V	4P MCCB	ABB
03	800A, 600V	4P MCB	ABB
05	800A, 600V	3P MCB	ABB
DC DISCONNECT	400A, 600V DC	4P MCB	ABB

ACCESSORIES			
MODEL	MAKE	TYPE	ACCESSORIES
OM-1003	Schneider Electric	1AUX.SW. K7AS	1AUX.SW. K7AS
SRN800BW-4	ABB	24Vdc shunt trip	1AUX.SW. K7AS
SRH800DW-4	ABB	24Vdc shunt trip	1AUX.SW. K7AS
SRH800W	ABB	24Vdc shunt trip	1AUX.SW. K7AS
T5	ABB	Shunt trip, Actuator	24VDC, Shunt trip, Actuator

Options

Hardware Options

Breakers

NOTE: 4-pole breakers are not available as an option in North America.

- T1 breaker kit for unsupported breaker amperages with current transformer without adaptors
- T3 breaker kit for unsupported breaker amperages with current transformer without adaptors
- 3-Pole circuit breaker, 60 A, T1 Type
- 3-Pole circuit breaker, 70 A, T1 Type
- 3-Pole circuit breaker, 80 A, T1 Type
- 3-Pole circuit breaker, 90 A, T1 Type
- 3-Pole circuit breaker, 100 A, T1 Type
- 3-Pole circuit breaker, 125 A, T3 Type
- 3-Pole circuit breaker, 150 A, T3 Type
- 3-Pole circuit breaker, 175 A, T3 Type
- 3-Pole circuit breaker, 200 A, T3 Type
- 3-Pole circuit breaker, 225 A, T3 Type
- 3-Pole circuit breaker, 300 A, T5 Type
- 3-Pole circuit breaker, 400 A, T5 Type
- 4-Pole circuit breaker, 60 A, T1 Type
- 4-Pole circuit breaker, 70 A, T1 Type
- 4-Pole circuit breaker, 80 A, T1 Type
- 4-Pole circuit breaker, 90 A, T1 Type
- 4-Pole circuit breaker, 100 A, T1 Type
- 4-Pole circuit breaker, 125 A, T3 Type
- 4-Pole circuit breaker, 150 A, T3 Type
- 4-Pole circuit breaker, 175 A, T3 Type
- 4-Pole circuit breaker, 200 A, T3 Type
- 4-Pole circuit breaker, 225 A, T3 Type
- Adaptor for T1 Type circuit breaker, 3 Pole
- Adaptor for T3 Type circuit breaker, 3 Pole
- Adaptor for T5 Type circuit breaker, 3 Pole

Symmetra Battery Systems

- Battery breaker cabinet with fuse kit for third party batteries
- Battery breaker cabinet
- Battery cabinet for up to 8 battery modules
- Battery cabinet for up to 8 battery modules and start up
- Battery cabinet with 8 battery modules and start up
- Battery sidecar for remote battery solution without fuse
- Battery sidecar for remote battery solution with 500 A fuse kit
- High performance battery module
- Value battery cabinet pair

- Pair of value battery cabinets with 7 minute battery @ 250 kW
- Pair of value battery cabinets with 7 minute battery @ 250 kW and including battery management

Other Options

- Air filters
- Optional terminal blocks
- 3.rd party switch gear kit
- Paralleling cable
- Seismic kits

Configuration Options

- Single or dual feed.
- Top or bottom feed.
- Internal N+1 redundancy.
- Unity power factor corrected.
- Automatic internal bypass.
- Toolless module replacement.
- Swappable static bypass switch.
- Swappable power modules.
- Swappable 9AH batteries.
- Up to eight external runtime frames with batteries.
- Main and redundant intelligence modules.
- Parallel up to four units for capacity or redundancy.
- Custom switchgear for parallel installations.
- Standard battery cabinet for third-party front-access batteries.
- Secondary network management card.
- SmartSlot communications cards.
- StruxureWare Central compatible.
- Network manageable.
- Generator compatible.
- Remote battery installations.
- Seismic bracket kits.
- External synchronization: Synchronize the output of the UPS with any other independent source for use with downstream static transfer switches.
- MegaTie: The UPS or block of UPSs may have the ability to transfer the load between them without active load sharing.
- EcoMode: In bypass operation, an even higher operating efficiency may be achieved without sacrificing protection when there are good power conditions. Depending on configuration, efficiency can exceed 99%.
- Virtual display: Download the display interface to your laptop or personal computer and monitor a complete system with up to 4 UPSs in parallel.

Limited Factory Warranty

One-Year Factory Warranty

The limited warranty provided by Schneider Electric in this Statement of Limited Factory Warranty applies only to products you purchase for your commercial or industrial use in the ordinary course of your business.

Terms of Warranty

Schneider Electric warrants that the product shall be free from defects in materials and workmanship for a period of one year from the date of product start-up when start-up is performed by Schneider Electric-authorized service personnel and occurs within six months of the Schneider Electric shipment date. This warranty covers repairing or replacing any defective parts including on-site labor and travel. In the event that the product fails to meet the foregoing warranty criteria, the warranty covers repairing or replacing defective parts at the sole discretion of Schneider Electric for a period of one year from the shipment date. For Schneider Electric cooling solutions, this warranty does not cover circuit breaker resetting, loss of refrigerant, consumables, or preventive maintenance items. Repair or replacement of a defective product or part thereof does not extend the original warranty period. Any parts furnished under this warranty may be new or factory-remanufactured.

Non-transferable Warranty

This warranty is extended to the first person, firm, association or corporation (herein referred to by "You" or "Your") for whom the Schneider Electric product specified herein has been purchased. This warranty is not transferable or assignable without the prior written permission of Schneider Electric.

Assignment of Warranties

Schneider Electric will assign you any warranties which are made by manufacturers and suppliers of components of the Schneider Electric product and which are assignable. Any such warranties are assigned "AS IS" and Schneider Electric makes no representation as to the effectiveness or extent of such warranties, assumes no responsibility for any matters which may be warranted by such manufacturers or suppliers and extends no coverage under this Warranty to such components.

Drawings, Descriptions

Schneider Electric warrants for the warranty period and on the terms of the warranty set forth herein that the Schneider Electric product will substantially conform to the descriptions contained in the Schneider Electric Official Published Specifications or any of the drawings certified and agreed to by contract with Schneider Electric if applicable thereto ("Specifications"). It is understood that the Specifications are not warranties of performance and not warranties of fitness for a particular purpose.

Exclusions

Schneider Electric shall not be liable under the warranty if its testing and examination disclose that the alleged defect in the product does not exist or was caused by end user or any third person misuse, negligence, improper installation or testing. Further, Schneider Electric shall not be liable under the warranty for unauthorized attempts to repair or modify wrong or inadequate electrical voltage or connection, inappropriate on-site operation conditions, corrosive atmosphere, repair, installation, start-up by non-Schneider Electric designated personnel, a change in location or operating use, exposure to the elements, Acts of God, fire, theft, or installation contrary to Schneider Electric recommendations or specifications or in any event if the Schneider Electric serial number has been altered, defaced, or removed, or any other cause beyond the range of the intended use.

THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED, BY OPERATION OF LAW OR OTHERWISE, OF PRODUCTS SOLD, SERVICED OR FURNISHED UNDER THIS AGREEMENT OR IN CONNECTION HEREWITH. SCHNEIDER ELECTRIC DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY, SATISFACTION AND FITNESS FOR A PARTICULAR PURPOSE. SCHNEIDER ELECTRIC EXPRESS WARRANTIES WILL NOT BE ENLARGED, DIMINISHED, OR AFFECTED BY AND NO OBLIGATION OR LIABILITY WILL ARISE OUT OF, SCHNEIDER ELECTRIC RENDERING OF TECHNICAL OR OTHER ADVICE OR SERVICE IN CONNECTION WITH THE PRODUCTS. THE FOREGOING WARRANTIES AND REMEDIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES AND REMEDIES. THE WARRANTIES SET FORTH ABOVE CONSTITUTE SCHNEIDER ELECTRIC SOLE LIABILITY AND PURCHASER'S EXCLUSIVE REMEDY FOR ANY BREACH OF SUCH WARRANTIES. SCHNEIDER ELECTRIC WARRANTIES RUN ONLY TO PURCHASER AND ARE NOT EXTENDED TO ANY THIRD PARTIES.

IN NO EVENT SHALL SCHNEIDER ELECTRIC, ITS OFFICERS, DIRECTORS, AFFILIATES OR EMPLOYEES BE LIABLE FOR ANY FORM OF INDIRECT, SPECIAL, CONSEQUENTIAL OR PUNITIVE DAMAGES, ARISING OUT OF THE USE, SERVICE OR INSTALLATION, OF THE PRODUCTS, WHETHER SUCH DAMAGES ARISE IN CONTRACT OR TORT, IRRESPECTIVE OF FAULT, NEGLIGENCE OR STRICT LIABILITY OR WHETHER SCHNEIDER ELECTRIC HAS BEEN ADVISED IN ADVANCE OF THE POSSIBILITY OF SUCH DAMAGES, SPECIFICALLY, SCHNEIDER ELECTRIC IS NOT LIABLE FOR ANY COSTS, SUCH AS LOST PROFITS OR REVENUE, LOSS OF EQUIPMENT, LOSS OF USE OF EQUIPMENT, LOSS OF SOFTWARE, LOSS OF DATA, COSTS OF SUBSTITUANTS, CLAIMS BY THIRD PARTIES, OR OTHERWISE.

NO SALESMAN, EMPLOYEE OR AGENT OF SCHNEIDER ELECTRIC IS AUTHORIZED TO ADD TO OR VARY THE TERMS OF THIS WARRANTY. WARRANTY TERMS MAY BE MODIFIED, IF AT ALL, ONLY IN WRITING SIGNED BY AN SCHNEIDER ELECTRIC OFFICER AND LEGAL DEPARTMENT.

Warranty Claims

Customers with warranty claims issues may access the SCHNEIDER ELECTRIC worldwide customer support network through the SCHNEIDER ELECTRIC web site: <http://www.schneider-electric.com>. Select your country from the country selection pull-down menu. Open the Support tab at the top of the web page to obtain contact information for customer support in your region.

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please ask for confirmation of the information given in this publication.