

Symmetra™ PX

250/500 kW 400/480 V

Technical Specifications

04/2015



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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.

Table of Contents

Important Safety Information	7
Safety Precautions	8
Technical Data	10
Model List	10
Systems with Maintenance Bypass and Distribution	10
Systems without Maintenance Bypass and Distribution	10
Efficiency (TÜV Certified)	11
480 V Systems	11
400/415 V Systems	11
Efficiency Curves	12
Derating due to Load Power Factor	13
Batteries	13
Efficiency DC to AC (TÜV Certified)	13
Electrolyte Values	13
Material Safety Data Sheets	13
Symmetra PX 100 kW Scalable to 250 kW 400/480 V Battery Run- Times (Minutes)	14
Symmetra PX 125 kW Scalable to 250/500 kW 400/480 V Battery Run-Times (Minutes)	15
Symmetra PX 150 kW Scalable to 250 kW 400/480 V Battery Run- Times (Minutes)	16
Symmetra PX 200 kW Scalable to 250 kW 400/480 V Battery Run- Times (Minutes)	17
Symmetra PX 250 kW Scalable to 500 kW 400/480 V Battery Run- Times (Minutes)	18
Symmetra PX 300 kW Scalable to 500 kW 400/480 V Battery Run- Times (Minutes)	19
Symmetra PX 400 kW Scalable to 500 kW 400/480 V Battery Run- Times (Minutes)	20
Symmetra PX 500 kW 400/480 V Battery Run-Times (Minutes)	21
Battery Gassing Rates Per Shelf/String (Cubic Feet per Hour)	21
Battery Discharge Current	22
End of Discharge Voltage at 100% Load	22
Communication and Management	22
Network Management Card	22
Relay Inputs/Outputs	23
Emergency Power Off (EPO)	24
Compliance	25
Facility Planning	26
Input Specifications	26
Bypass Specifications	26
Output Specifications	27
Battery Specifications	27
Overview of Systems with Maintenance Bypass	28
Single Configurations	28
Overview of Systems without Maintenance Bypass	28
Single Configurations	28

Parallel Configurations	29
Fuses, Breakers, and Cables in the US	30
Parallel Systems	30
Recommended Fuses, Breakers, and Cable Sizes in the US	33
Fuses, Breakers, and Cables in Europe, Africa, and Asia	36
Required Breaker Settings for Input Overload and Short-Circuit	
Protection for Breakers with Electronic Trip Units	38
Single Utility/Mains Installation (Common Input and Bypass	
Breaker)	38
Dual Utility/Mains Installation (Separate Input and Bypass	
Breaker)	38
Torque Specifications	38
Physical	38
Weights and Dimensions	38
Shipping Weights and Dimensions	39
Clearance	39
Environmental	41
Heat Dissipation	41
Drawings	42
Symmetra PX 500 kW 400 V Single Utility/Mains with Maintenance	
Bypass and Line-Up-And-Match Batteries – Bottom Feed	43
Symmetra PX 500 kW 400 V Single Utility/Mains with Maintenance	
Bypass and Line-Up-And-Match Batteries – Top Feed	44
Symmetra PX 500 kW 400 V Single Utility/Mains with Maintenance	
Bypass and Remote Batteries — Top Feed	45
Symmetra PX 500 kW 400 V Single Utility/Mains with Maintenance	
Bypass and Remote Batteries – Bottom Feed	46
Symmetra PX 500 kW 400 V Dual Mains with Maintenance Bypass and	
Line-Up-And-Match Batteries – Top Feed	47
Symmetra PX 500 kW 400 V Dual Utility/Mains with Maintenance Bypass	
and Remote Batteries – Bottom Feed	48
Symmetra PX 500 kW 400 V Dual Utility/Mains with Maintenance Bypass	
and Line-Up-And-Match Batteries – Bottom Feed	49
Symmetra PX 500 kW 400 V Dual Utility/Mains with Maintenance Bypass	
and Remote Batteries – Top Feed	50
Symmetra PX 500 kW 480 V Single Mains with Maintenance Bypass (3	
Wire Output) and Line-Up-And-Match Batteries – Top Feed	51
Symmetra PX 500 kW 480 V Dual Mains with Maintenance Bypass (3	
Wire Output) and Line-Up-And-Match Batteries – Top Feed	52
Symmetra PX 500 kW 480 V Single Mains with Maintenance Bypass (3	
Wire Output) and Line-Up-And-Match Batteries – Bottom Feed	53
Symmetra PX 500 kW 480 V Dual Mains with Maintenance Bypass (3	
Wire Output) and Line-Up-And-Match Batteries – Bottom Feed	54
Symmetra PX 500 kW 480 V Single Mains with Maintenance Bypass (4	
Wire Output) and Line-Up-And-Match Batteries – Top Feed	55
Symmetra PX 500 kW 480 V Dual Mains with Maintenance Bypass (4	
Wire Output) and Line-Up-And-Match Batteries – Top Feed	56
Symmetra PX 500 kW 480 V Single Mains with Maintenance Bypass (4	
Wire Output) and Line-Up-And-Match Batteries – Bottom Feed	57
Symmetra PX 500 kW 480 V Dual Mains with Maintenance Bypass (4	
Wire Output) and Line-Up-And-Match Batteries – Bottom Feed	58

Options	59
Hardware Options.....	59
Breakers	59
Symmetra Battery Systems	59
Other Options	60
Configuration Options	60
Schneider Electric Limited Factory Warranty.....	61

Important Safety Information

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-inflammable, 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.

⚠ WARNING**HAZARD OF OVERHEATING**

Respect the space 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 death, serious injury, or equipment damage.

⚠ WARNING**HAZARD 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 death, serious injury, or 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

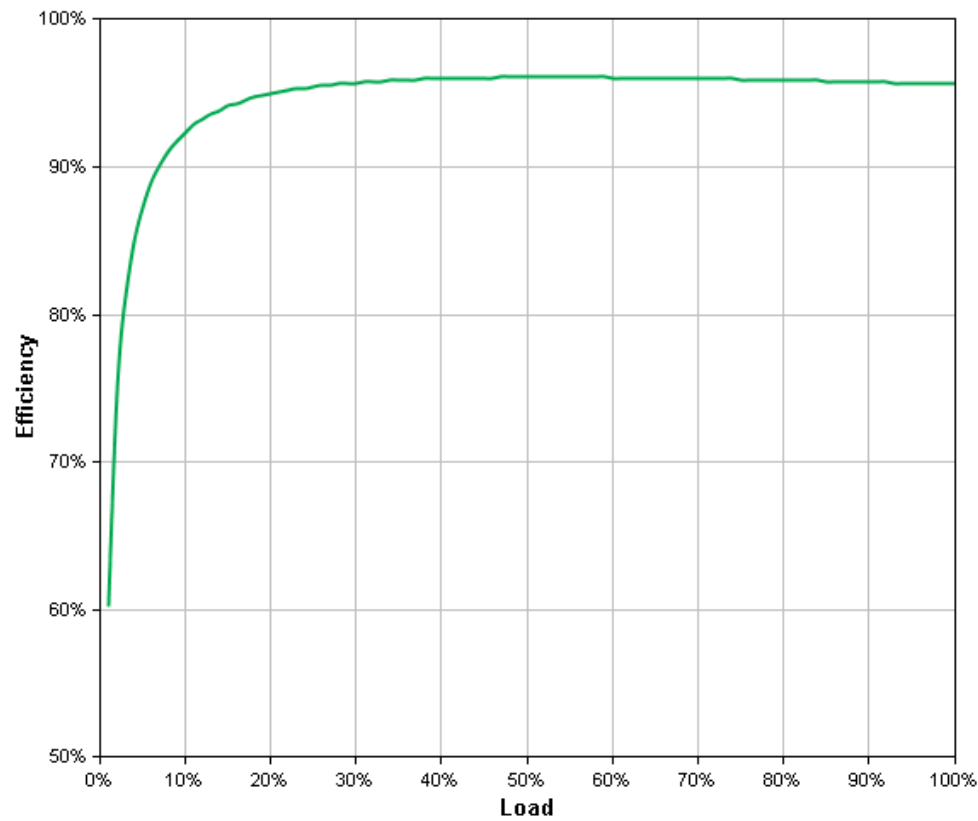
System	25% load	50% load	75% load	100% load
250 kW	95.2	96.2	96.3	96.3
500 kW	95.5	96.3	96.4	96.3

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

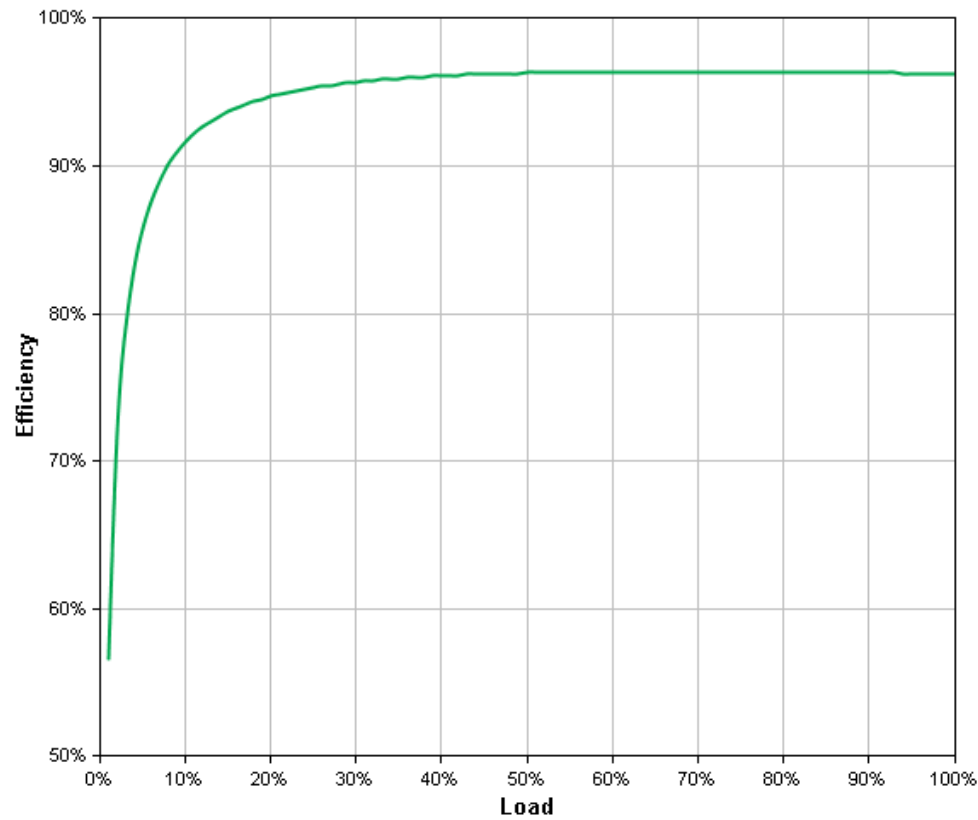
Efficiency Curves

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	288 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)			

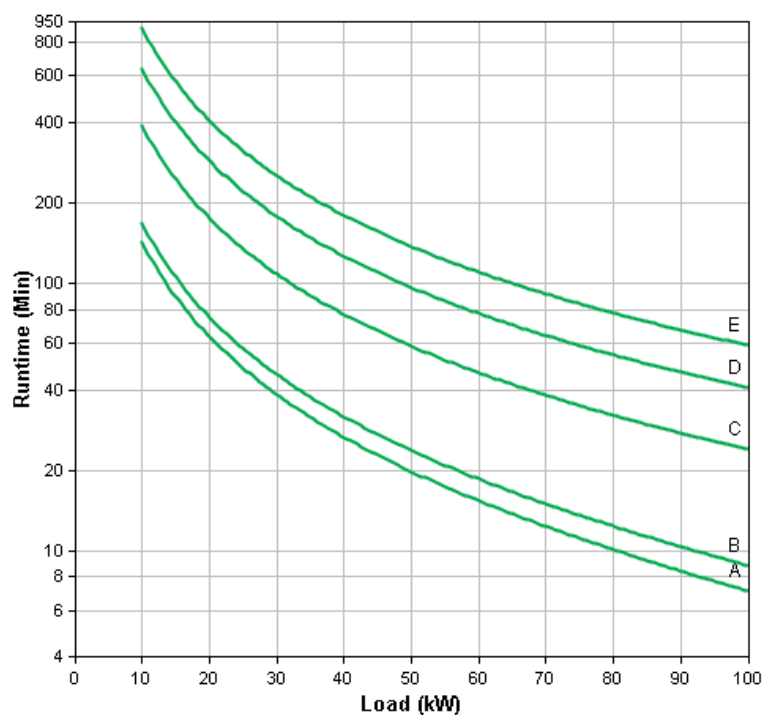
Material Safety Data Sheets

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

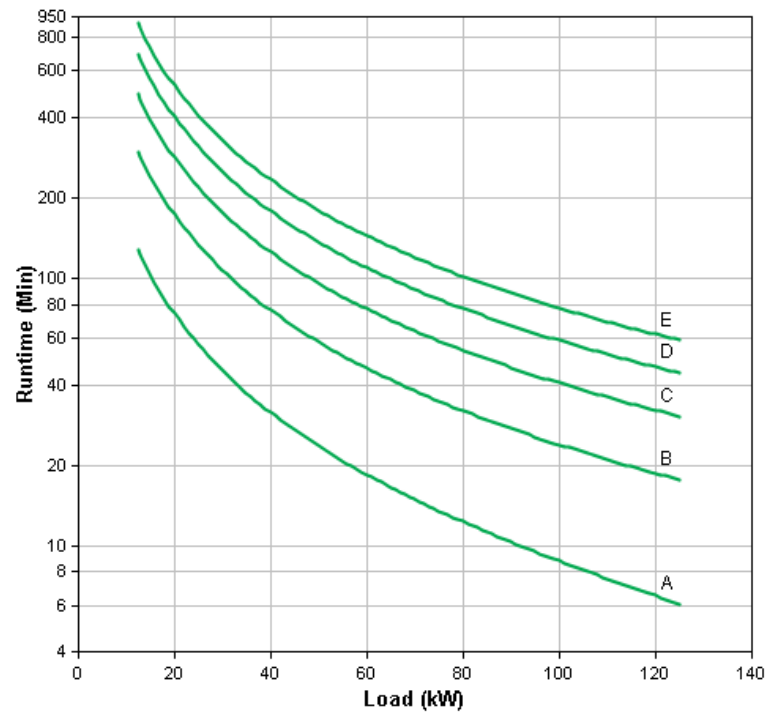
The material safety data sheets are placed in the knowledge base on www.apc.com.

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



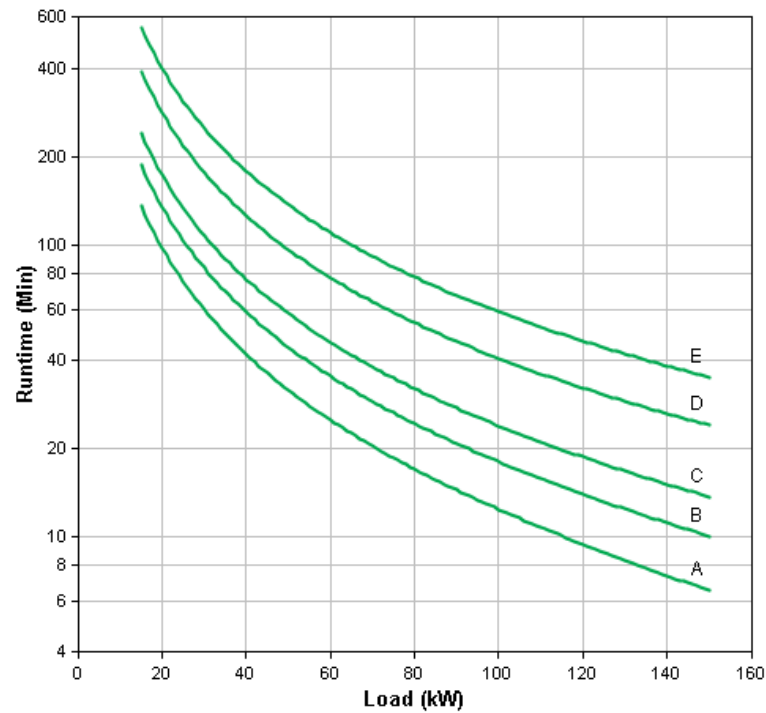
		Load (kW)				
	Part numbers	20	40	60	80	100
A	SY100K250D SY100K250DL-PD SY100K250DR-PD	63	27	15	10	7
B	+ (1)SYBT9-B6 or SYBT9-B6LL	75	32	19	12	9
C	+ (1)SYBFXR8-8	176	76	47	32	24
D	+ (2)SYBFXR8-8	288	126	77	54	41
E	+ (3)SYBFXR8-8	408	180	110	77	59

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



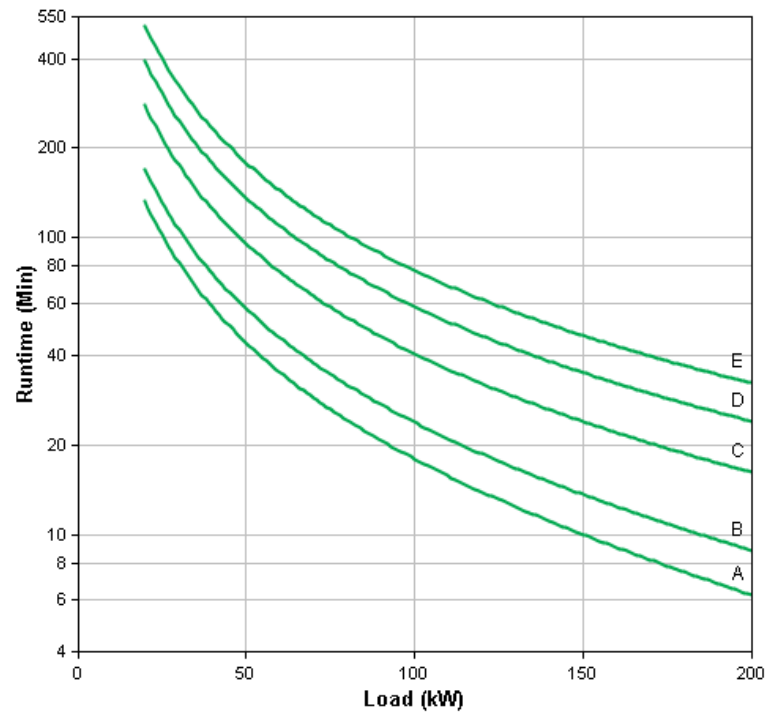
		Load (kW)					
	Part numbers	20	40	60	80	100	125
A	SY125K250D SY125K250DR-PD SY125K250DL-PD	74	32	19	12	9	6
B	+ (1)SYBFXR8-8	174	76	46	32	24	18
C	+ (2)SYBFXR8-8	285	126	77	54	41	31
D	+ (3)SYBFXR8-8	404	179	110	77	59	44
E	+ (4)SYBFXR8-8	529	235	144	102	77	59

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



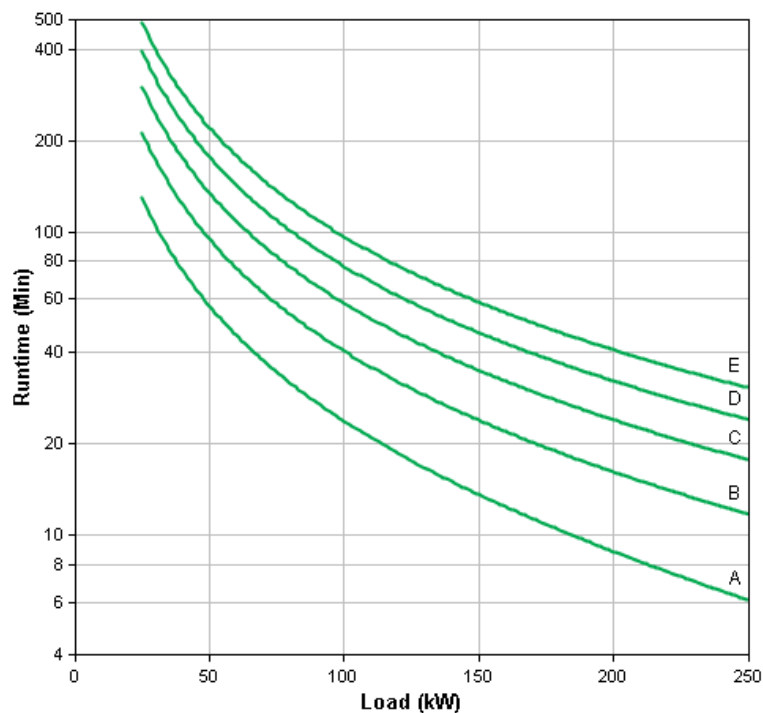
		Load (kW)						
	Part numbers	20	40	60	80	100	125	150
A	SY150K250D SY150K250DL-PD SY150K250DR-PD	97	42	25	17	12	9	7
B	+ (3)SYBT9-B6 or SYBT9-B6LL	134	59	35	24	18	13	10
C	+ (6)SYBT9-B6 or SYBT9-B6LL	173	76	46	32	24	18	14
D	+ (1)SYBFXR8-8	283	125	76	54	41	31	24
E	+ (2)SYBFXR8-8	401	178	109	77	59	44	35

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



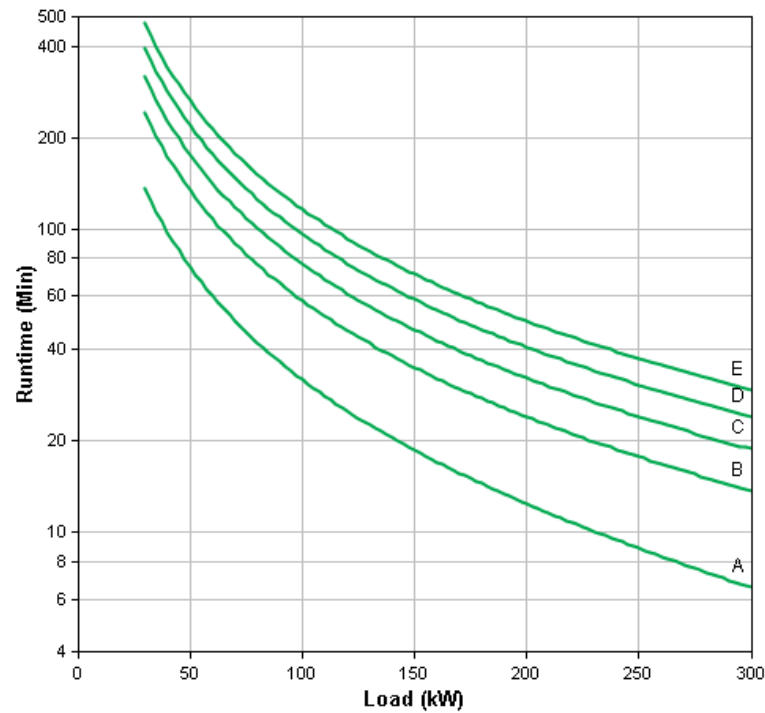
		Load (kW)								
	Part numbers	20	40	60	80	100	125	150	175	200
A	SY200K250S SY200K250DL-PD SY200K250DR-PD	131	58	35	24	18	13	10	8	6
B	+ (3)SYBT9-B6 or SYBT9-B6LL	170	75	46	32	24	18	14	11	9
C	+ (1)SYBFXR8-8	278	124	76	54	41	30	24	19	16
D	+ (2)SYBFXR8-8	394	177	109	77	59	44	35	29	24
E	+ (3)SYBFXR8-8	516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

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



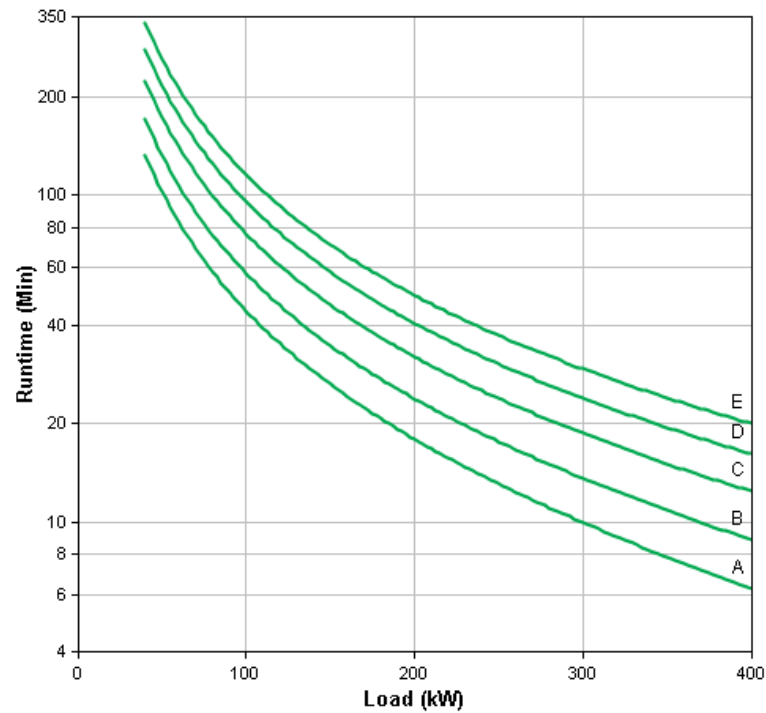
		Load (kW)									
	Part numbers	20	40	60	80	100	125	150	175	200	250
A	SY250K500D SY250K500DL-PD SY250K500DR-PD	167	74	46	32	24	18	14	11	9	6
B	+ (1)SYBFXR8-8	273	123	76	53	40	30	24	19	16	12
C	+ (2)SYBFXR8-8	387	175	108	76	58	44	35	29	24	18
D	+ (3)SYBFXR8-8	507	230	142	101	77	59	47	38	32	24
E	+ (4)SYBFXR8-8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



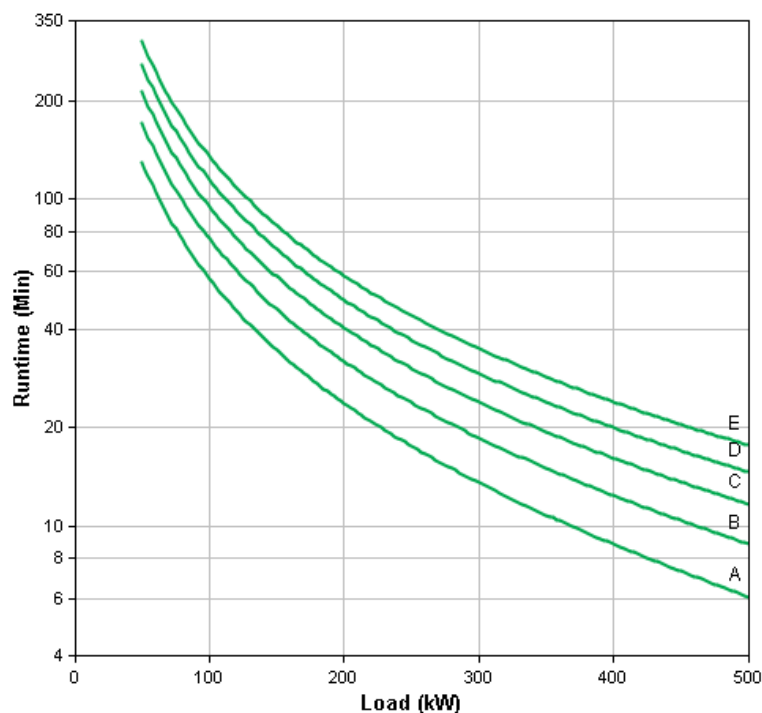
		Load (kW)									
	Part numbers	20	40	60	80	100	125	150	175	200	300
A	SY300K500D SY300K500DL-PD SY300K500DR-PD	215	97	60	42	32	24	19	15	12	7
B	+ (2)SYBFXR8-8	381	174	107	76	58	44	35	29	24	14
C	+ (3)SYBFXR8-8	622	284	177	126	96	73	59	48	41	24
D	+ (4)SYBFXR8-8	749	343	214	152	116	88	71	59	50	30
E	+ (5)SYBFXR8-8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

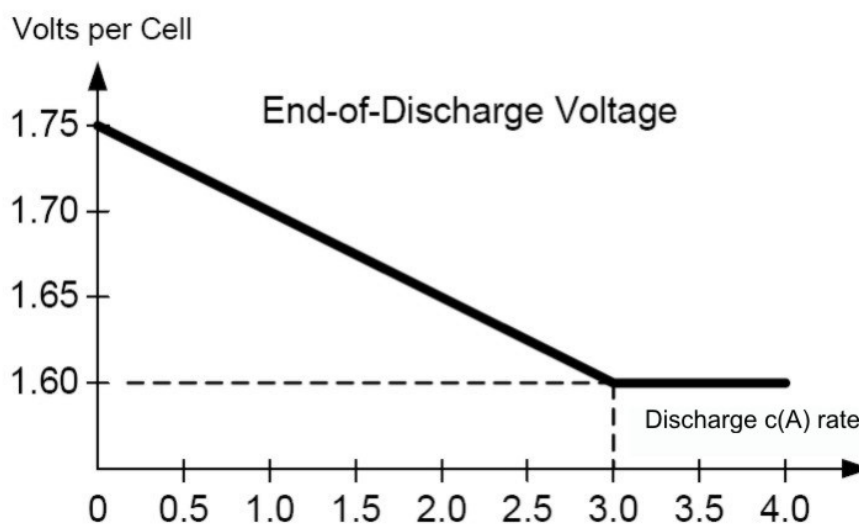
Number of battery modules	1	2	3	4	5	6	7	8
	0.06048	0.12096	0.18144	0.24192	0.30240	0.36288	0.42336	0.48384

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

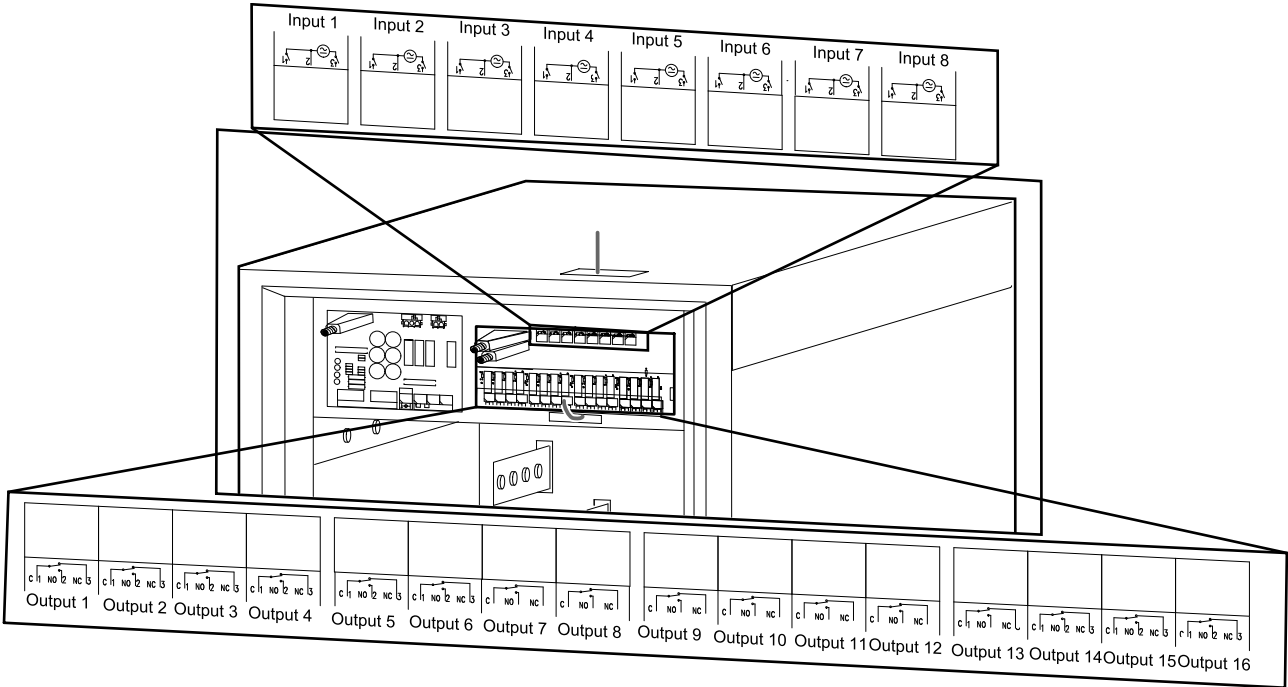
The system is equipped with one network management card for remote monitoring and control of an individual UPS. It is possible to add an additional network management card.

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

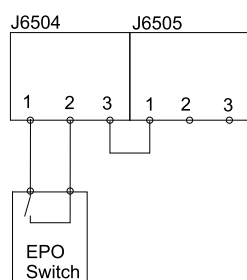
Outputs

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

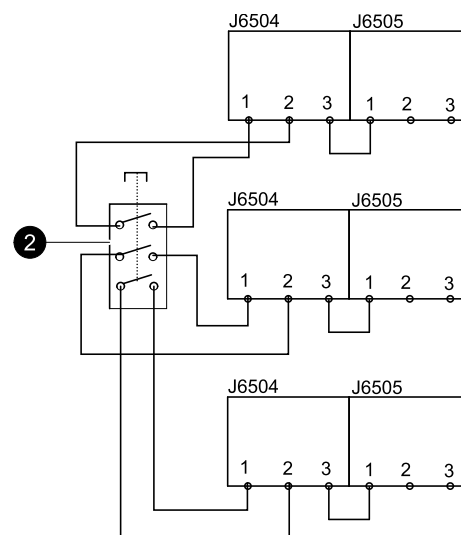
Output 1	Common alarm, configurable
Output 2	Normal operation, configurable
Output 3	Bypass operation, configurable
Output 4	Battery operation, configurable
Output 5	Battery voltage low, configurable
Output 6	Battery fault, configurable
Output 7	Maintenance bypass on, configurable
Output 8	Input outside 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
- This product is ENERGY STAR® qualified.

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 input short-circuit level (kA)	65 kA/3 cycles (50 kA with standard maintenance bypass)							
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

1. 380 V has reduced input voltage window (-10% at 100% load).
2. Input current based on rated load and 100% charged batteries.
3. Input current based on 100% battery recharge, nominal voltage and rated load.
4. Current limitation through electronic current limiting is based on 100% battery recharge and -15% input voltage.

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							
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

5. This is a thermal performance rating. The continuous overload is not supported by the recommended input protection of the maintenance bypass.

Overview of Systems with Maintenance Bypass

Single Configurations

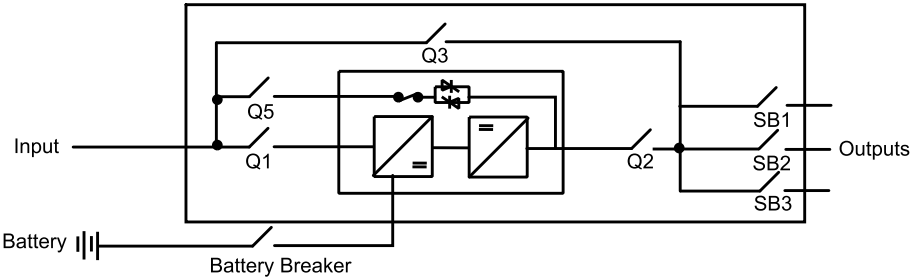
NOTICE

HAZARD OF EQUIPMENT DAMAGE

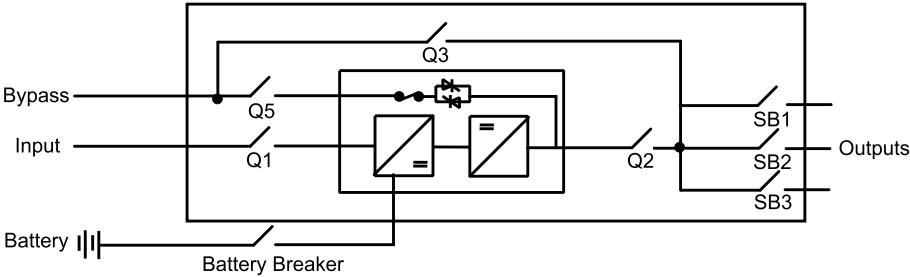
The neutral connection to utility/mains must not be disconnected even in battery operation. Therefore 4–pole disconnectors/switches must not be used on the bypass.

Failure to follow these instructions can result in equipment damage.

Single Utility/Mains with Maintenance Bypass



Dual Utility/Mains with Maintenance Bypass



Overview of Systems without Maintenance Bypass

Single Configurations

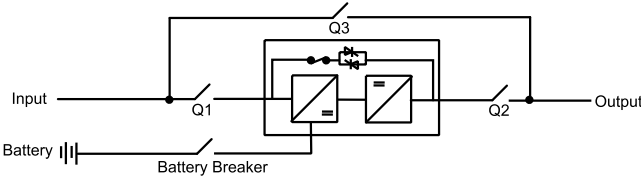
NOTICE

HAZARD OF EQUIPMENT DAMAGE

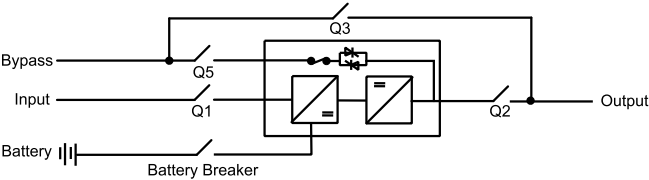
The neutral connection to utility/mains must not be disconnected even in battery operation. Therefore 4–pole disconnectors/switches must not be used on the bypass.

Failure to follow these instructions can result in equipment damage.

Single Utility/Mains without Maintenance Bypass

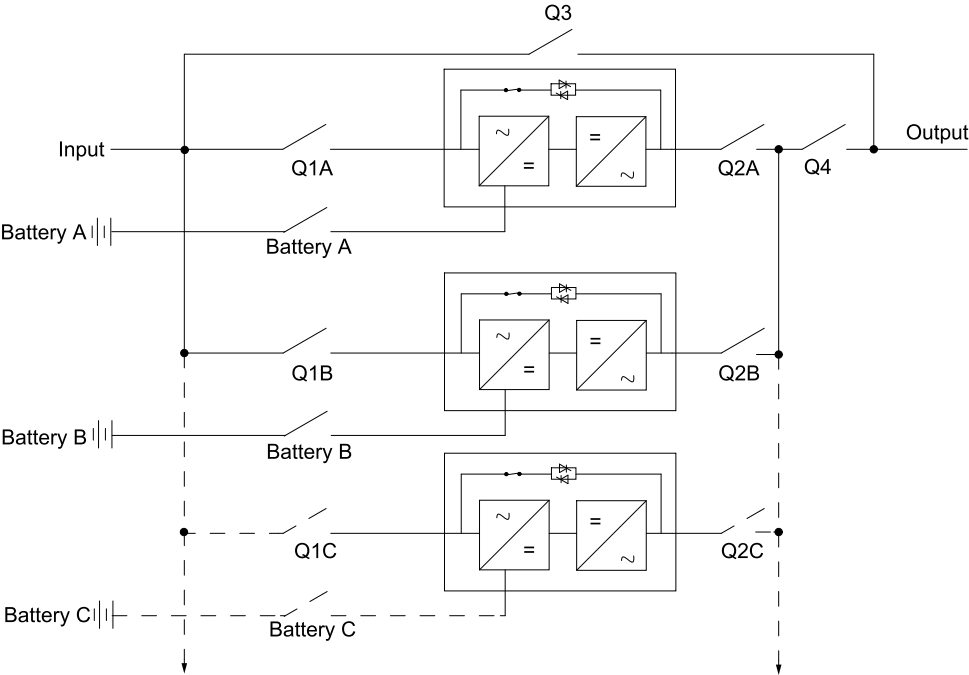


Dual Utility/Mains without Maintenance Bypass

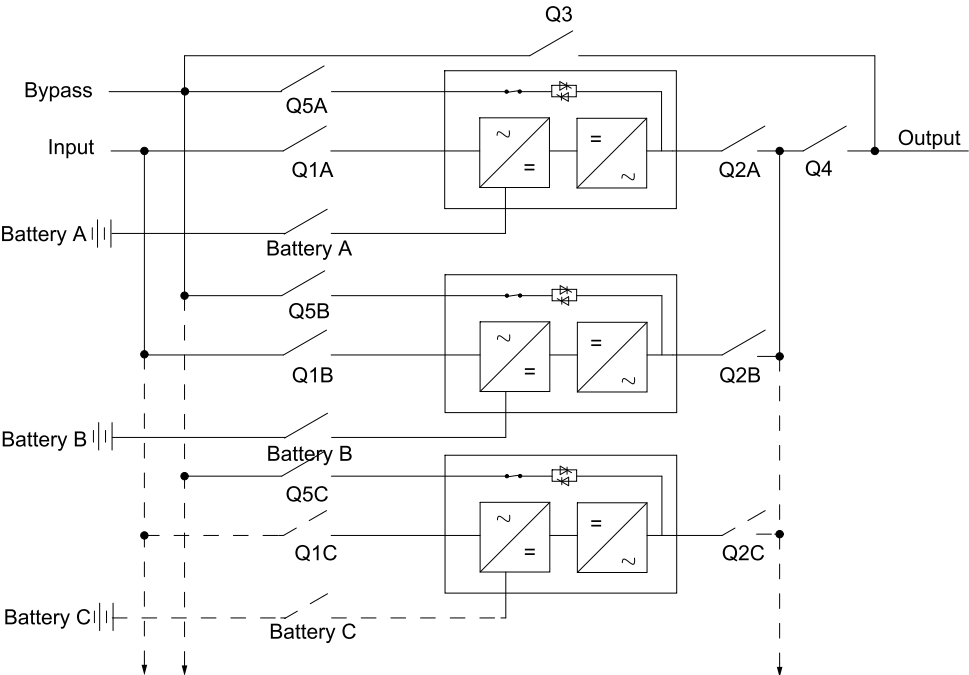


Parallel Configurations

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.”

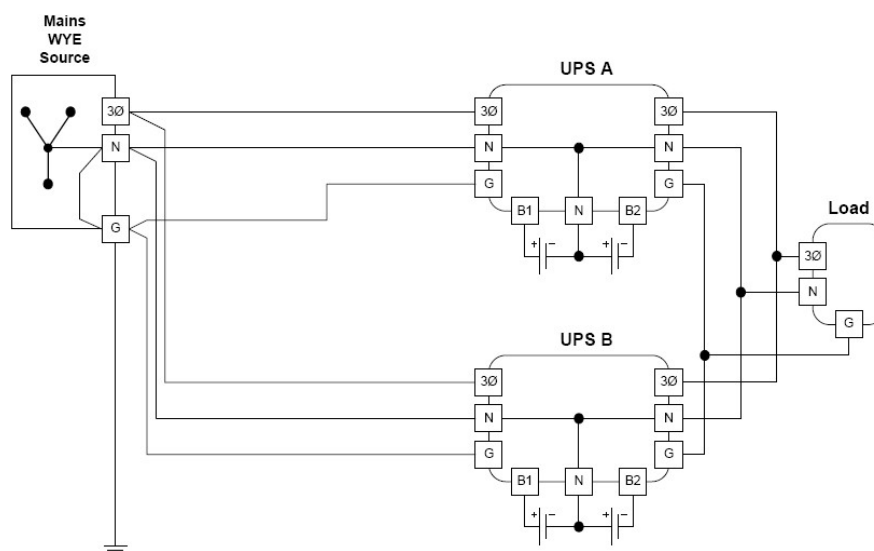
Failure to follow these instructions can result in equipment damage.

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.



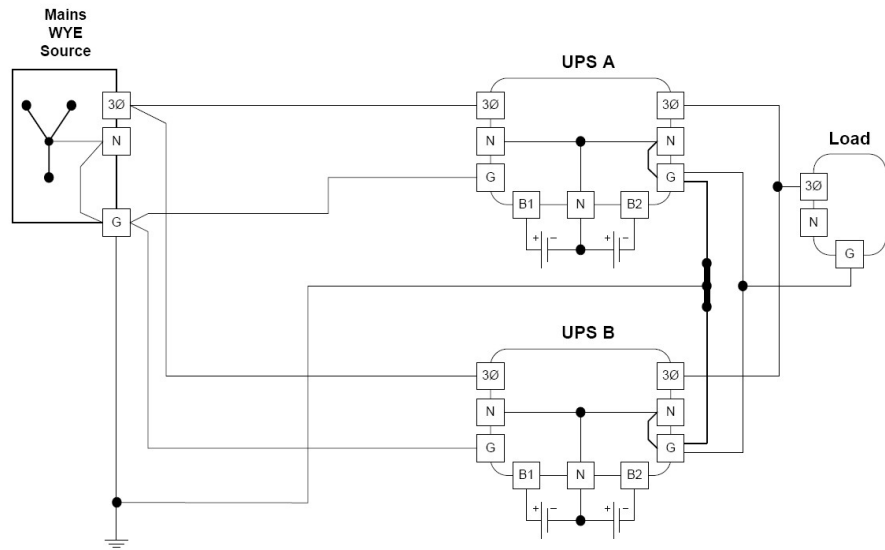
However if the load is a 3–phase load, the three alternatives below for 3–wire installations are allowed:

NOTICE**HAZARD OF MALFUNCTIONING**

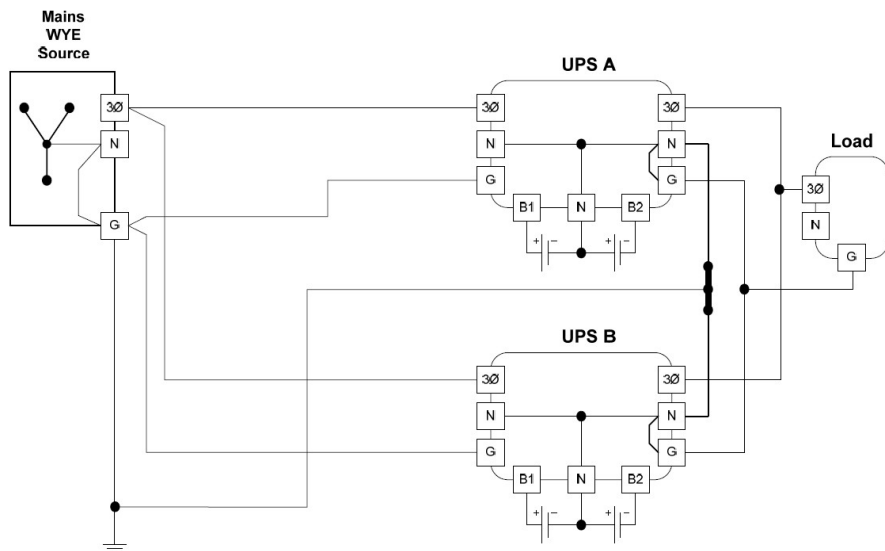
Phase-Neutral loading is not permitted.

Failure to follow these instructions can result in equipment damage.

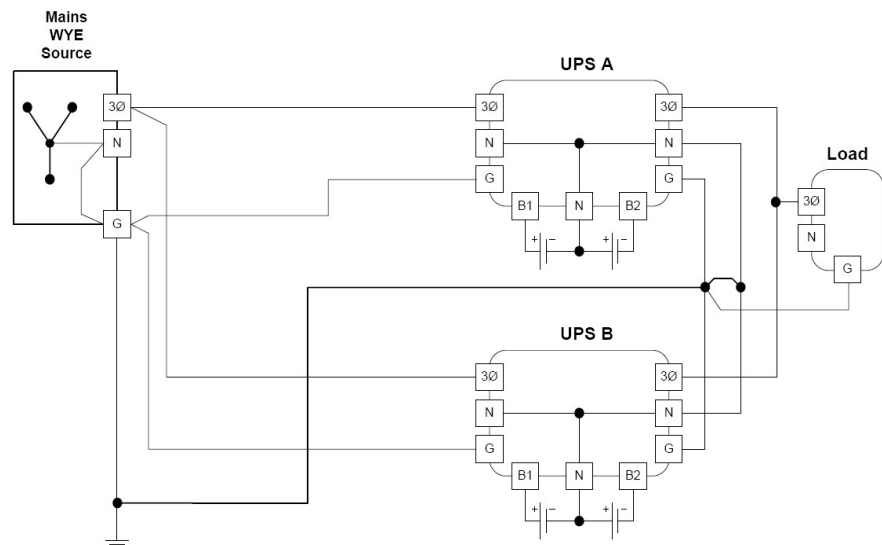
- Connect an N-G bond in each UPS, and connect the UPS output ground via tap conductors to a common grounded electrode bus and a single grounding electrode conductor. See NEC 250.30 (A)(4), including Exception #1.



- 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 38 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

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.

Installations with 80% Rated Circuit Breakers

500 kW						
	400 V		415 V		480 V	
	OC PD (A)	Cable	OC PD (A)	Cable	OC PD (A)	Cable
Bypass Q5 ⁸	Not allowed		Not allowed		800	3 x 250
Battery ⁹	1000	3 x 400	1000	3 x 400	1000	3 x 400
Output Q2	Not allowed		Not allowed		800	2 x 500

Typical Q3 and Q4 Breaker Sizes for Parallel Systems

250 kW units in parallel						
	400 V		415 V		480 V	
OC PD 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	
OC PD 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

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

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.

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 38 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 (mm²)	B2 (mm²)	C (mm²)	OCPD (A)	B1 (mm²)	B2 (mm²)	C (mm²)
	400 V				415 V			
	250 kW							
Input	400 ¹	2 x 95	2 x 120	2 x 95	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 120	2 x 95
Battery ¹¹	500	1 x 120	3 x 95	2 x 95	500	1 x 120	3 x 95	2 x 95

10. 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.

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.

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							
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 ¹²	4 x 120	-	3 x 150
Bypass	800	4 x 120	-	3 x 150	800	4 x 120	-	3 x 150
Battery ¹³	1000	-	-	3 x 240	1000	-	-	3 x 240
Output	800	4 x 120	-	3 x 150	800	4 x 120	-	3 x 150

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 ¹⁴	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 ¹³	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 ¹⁴	800	4 x 120	-	3 x 150	800	4 x 120	-	3 x 150
Battery ¹³	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

12. 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.

13. 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.

14. Maximum input protection is 800 A.

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	$I_n \times A$ ($3 < A < 4$)
STD	Maximum 100 ms
LTD	Maximum $3 \times I_n$ in 5s
linst	$I_n \times 5$

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

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

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)

Cabinets	Weight kg (lbs)
Battery side car (SYBSC)	149 (328)
Battery breaker cabinet (SYBBE)	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)	365 (805)	2135 (84.06)	750 (29.53)	1210 (47.64)

Clearance

DANGER

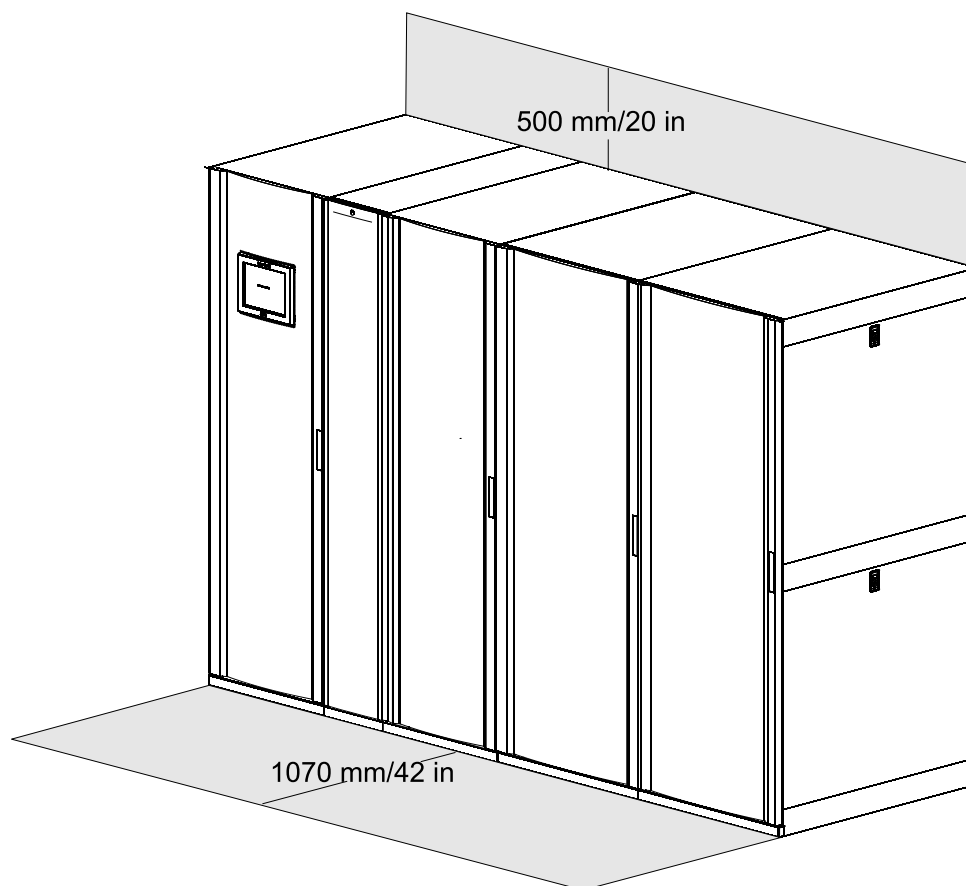
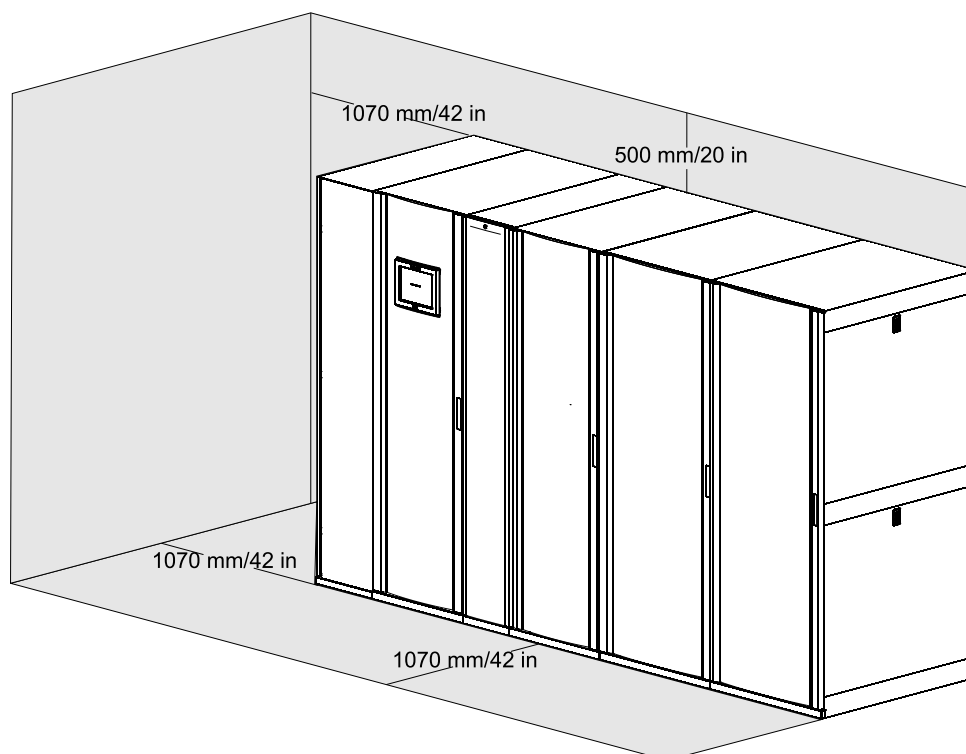
HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH

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 ¹⁵ (BTU/hr)	14 217	17 771	21 325	24 879	28 433	31 968	35 542	39 096	42 650
Heat dissipation ¹⁶ (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 ¹⁵ (BTU/hr)	46 204	49 758	53 313	56 867	60 421	63 975	67 529	71 083
Heat dissipation ¹⁶ (BTU/hr)	55 586	59 852	64 138	68 414	72 690	76 966	81 241	85 517

15. Batteries fully charged

16. Batteries charging

Drawings

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

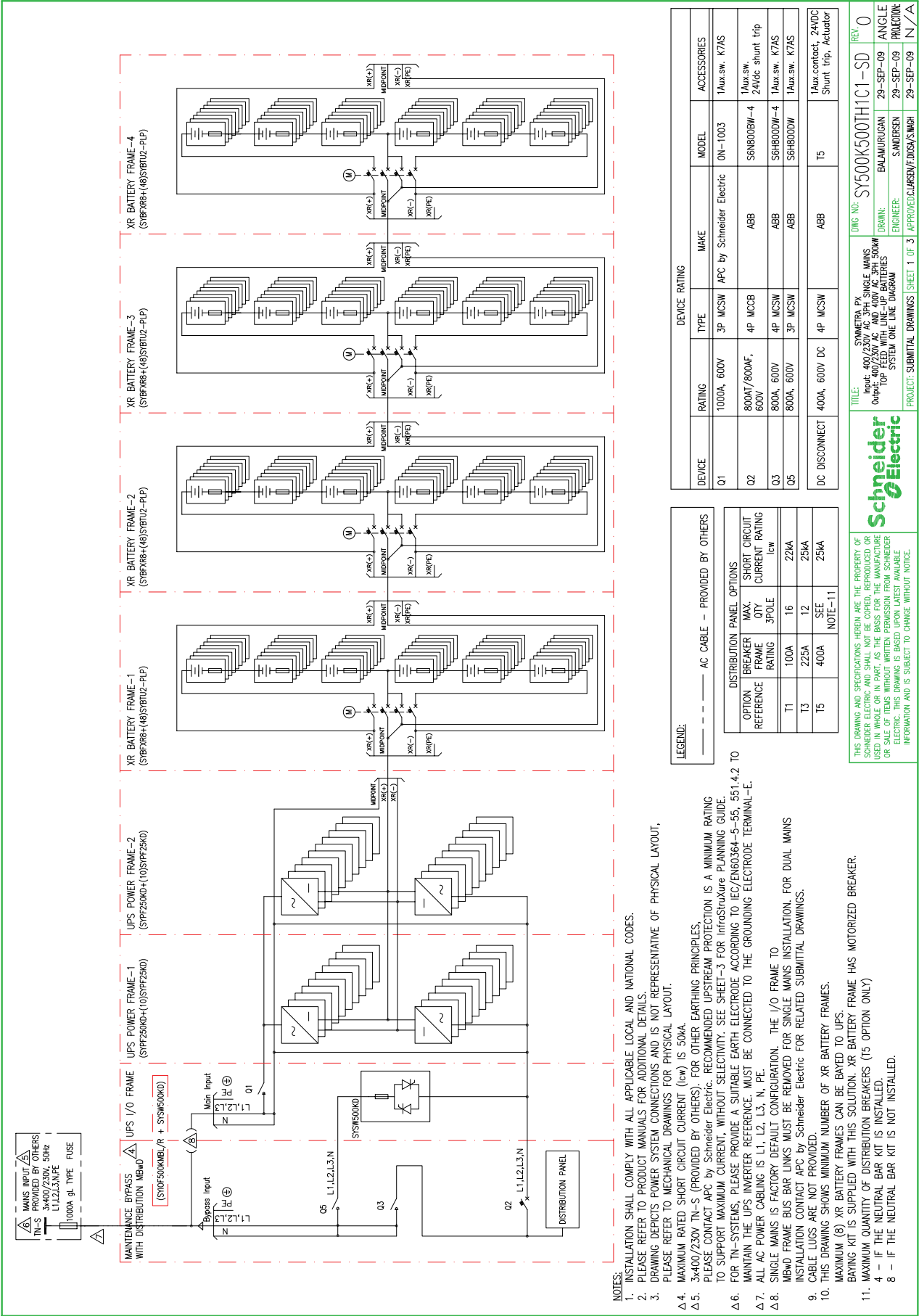
NOTE: These drawings are for reference ONLY — subject to change without notice.

NOTES:

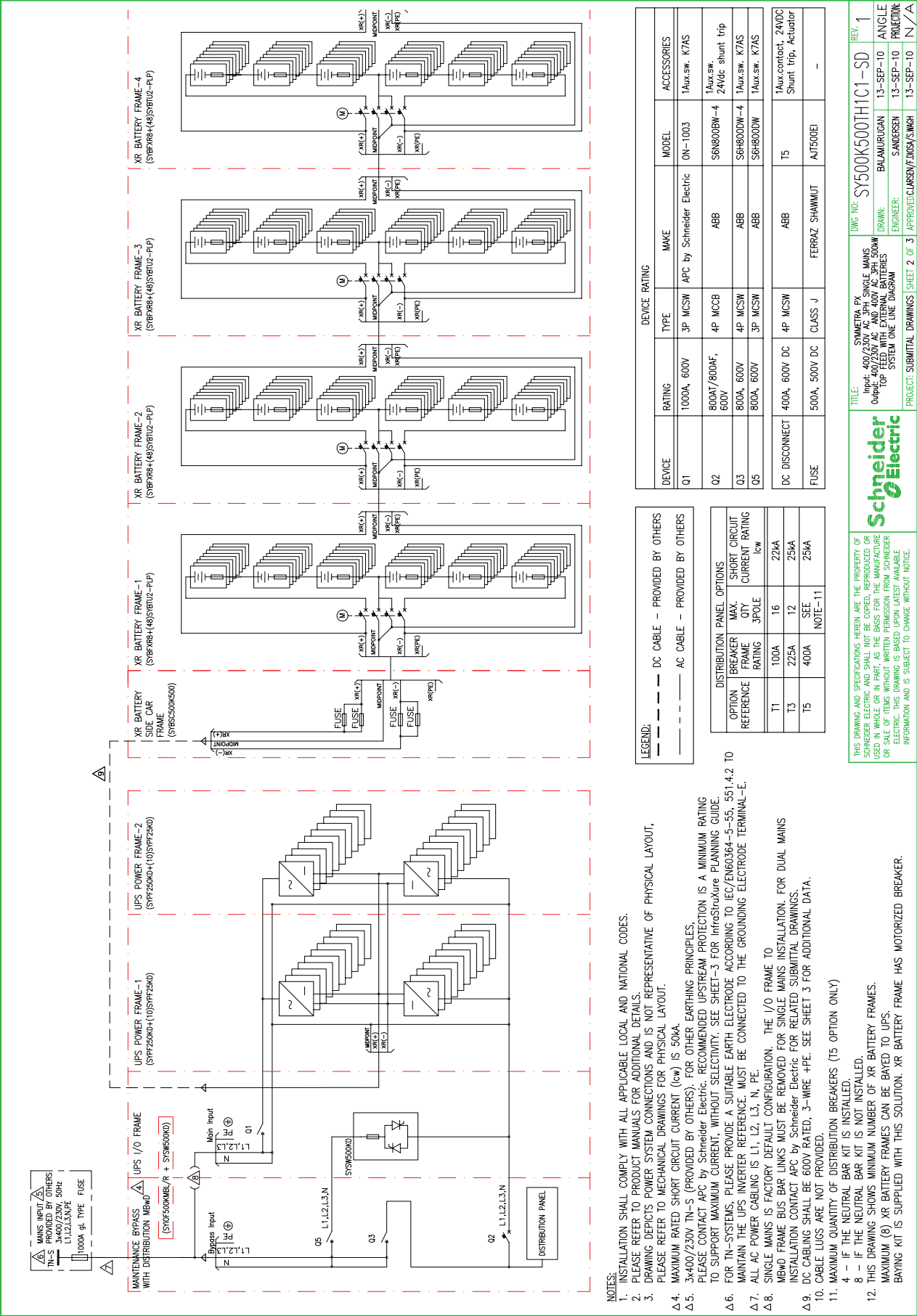
1. INSTALLATION SHALL COMPLY WITH ALL APPLICABLE LOCAL AND NATIONAL CODES.
2. PLEASE REFER TO PRODUCT MANUALS FOR ADDITIONAL DETAILS.
3. DRAWING DEPICTS POWER SYSTEM CONNECTIONS AND IS NOT REPRESENTATIVE OF PHYSICAL LAYOUT, PLEASE REFER TO MECHANICAL DRAWINGS FOR PHYSICAL LAYOUT.
4. MAXIMUM RATED SHORT CIRCUIT CURRENT (Icw) IS 50KA.
5. 34400/230V 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 CABLEING IS L1, L2, L3, N, PE.
8. SINGLE MAINS IS FACTORY DEFAULT CONFIGURATION. THE I/O FRAME TO INSTALLATION CONTACT APC MUST BE REMOVED FOR SINGLE MAINS INSTALLATION. FOR DUAL MAINS INSTALLATION CONTACT APC BY Schneider Electric FOR RELATED SUBMITTAL DRAWINGS.
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.

DEVELOPMENT	REVISION	DATE	BY	CHKD	APPD	DESCRIPTION
01	1	2023-09-09	SD			INITIAL DESIGN
02	2	2023-09-09	SD			REVISION 1
03	3	2023-09-09	SD			REVISION 2
04	4	2023-09-09	SD			REVISION 3
05	5	2023-09-09	SD			REVISION 4
06	6	2023-09-09	SD			REVISION 5
07	7	2023-09-09	SD			REVISION 6
08	8	2023-09-09	SD			REVISION 7
09	9	2023-09-09	SD			REVISION 8
10	10	2023-09-09	SD			REVISION 9
11	11	2023-09-09	SD			REVISION 10
12	12	2023-09-09	SD			REVISION 11
13	13	2023-09-09	SD			REVISION 12
14	14	2023-09-09	SD			REVISION 13
15	15	2023-09-09	SD			REVISION 14
16	16	2023-09-09	SD			REVISION 15
17	17	2023-09-09	SD			REVISION 16
18	18	2023-09-09	SD			REVISION 17
19	19	2023-09-09	SD			REVISION 18
20	20	2023-09-09	SD			REVISION 19
21	21	2023-09-09	SD			REVISION 20
22	22	2023-09-09	SD			REVISION 21
23	23	2023-09-09	SD			REVISION 22
24	24	2023-09-09	SD			REVISION 23
25	25	2023-09-09	SD			REVISION 24
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47	47	2023-09-09	SD			REVISION 46
48	48	2023-09-09	SD			REVISION 47
49	49	2023-09-09	SD			REVISION 48
50	50	2023-09-09	SD			REVISION 49
51	51	2023-09-09	SD			REVISION 50
52	52	2023-09-09	SD			REVISION 51
53	53					

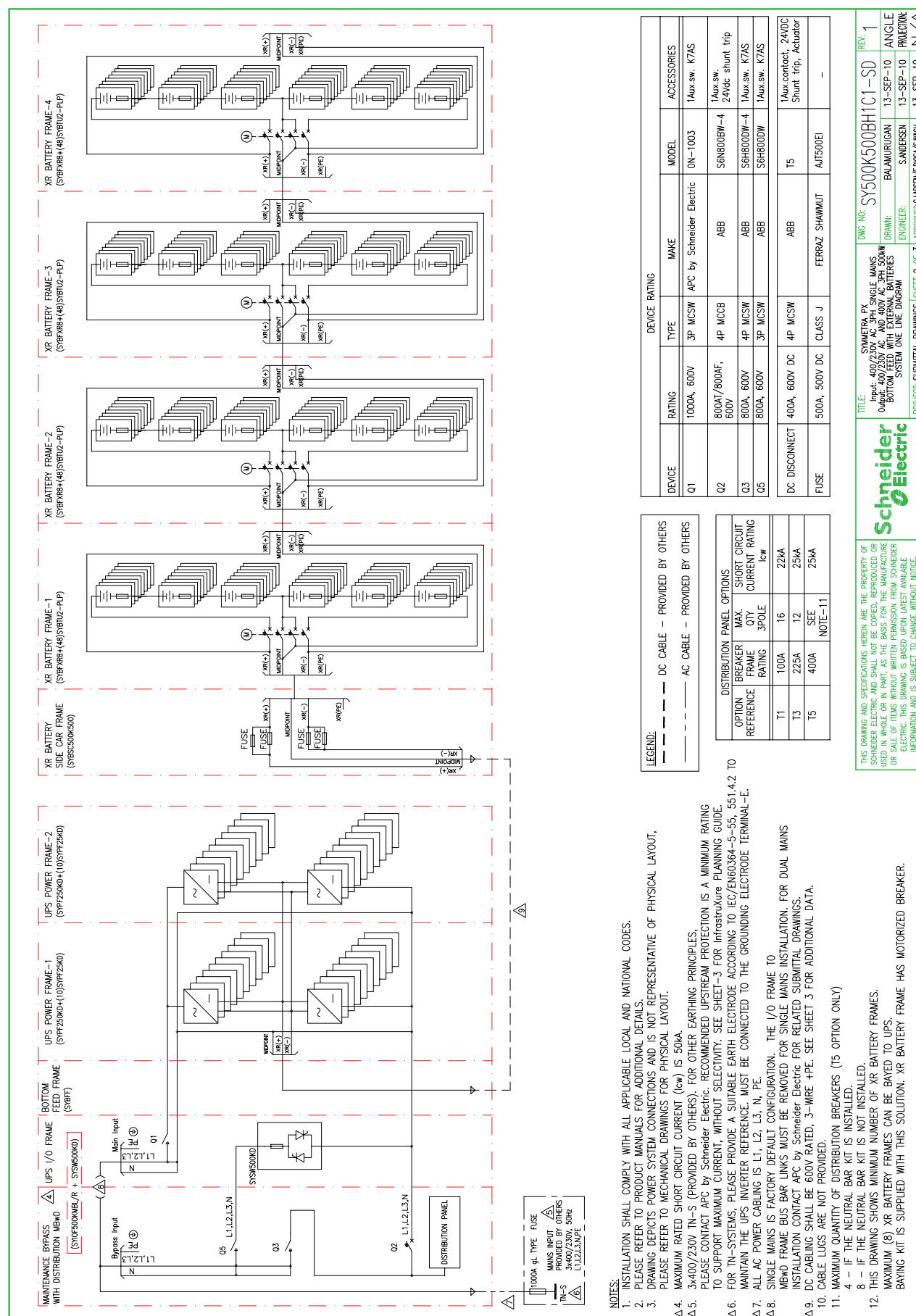
Symmetra PX 500 kW 400 V Single Utility/Mains with Maintenance Bypass and Line-Up-And-Match Batteries – Top Feed



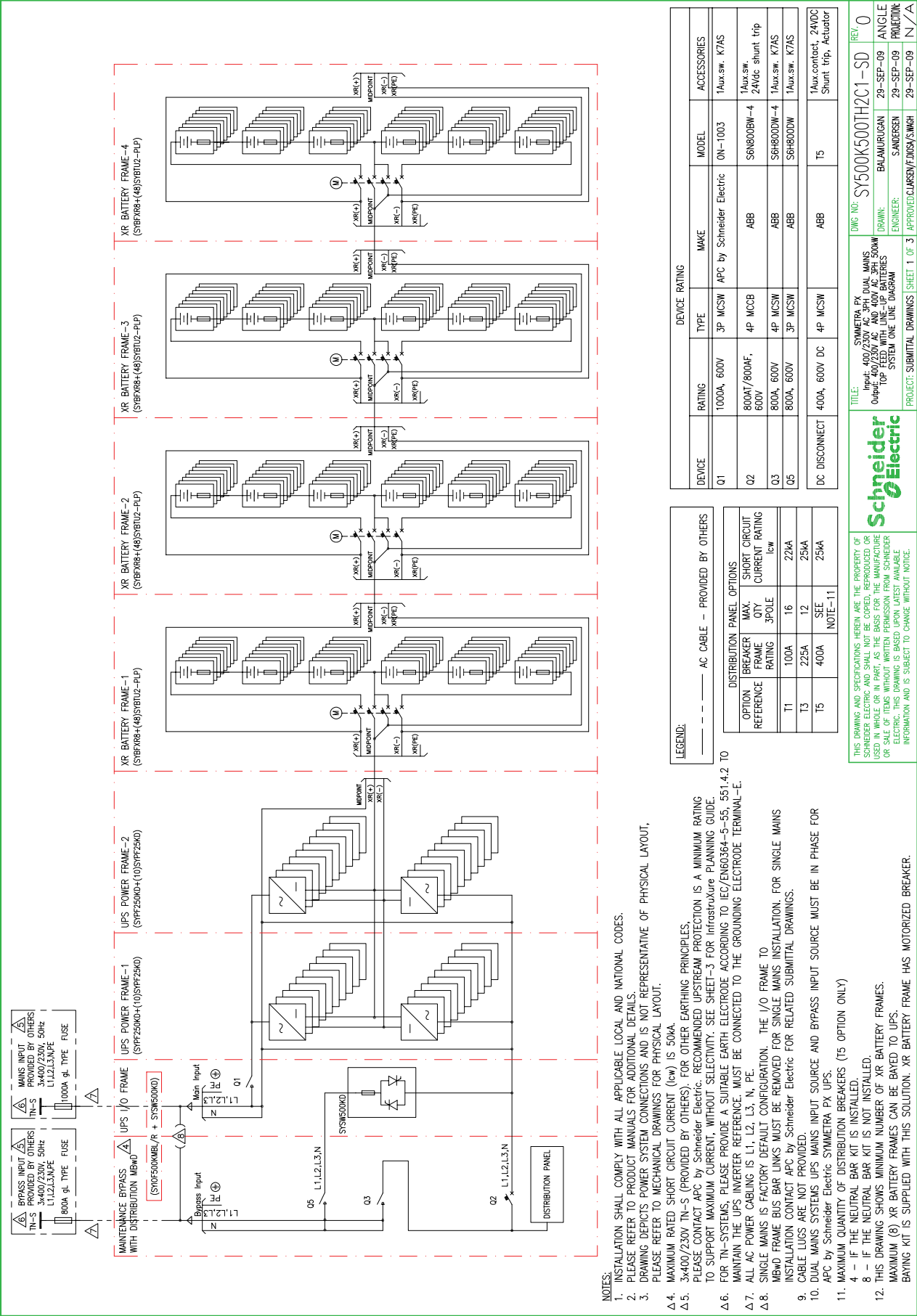
Symmetra PX 500 kW 400 V Single Utility/Mains with Maintenance Bypass and Remote Batteries — Top Feed



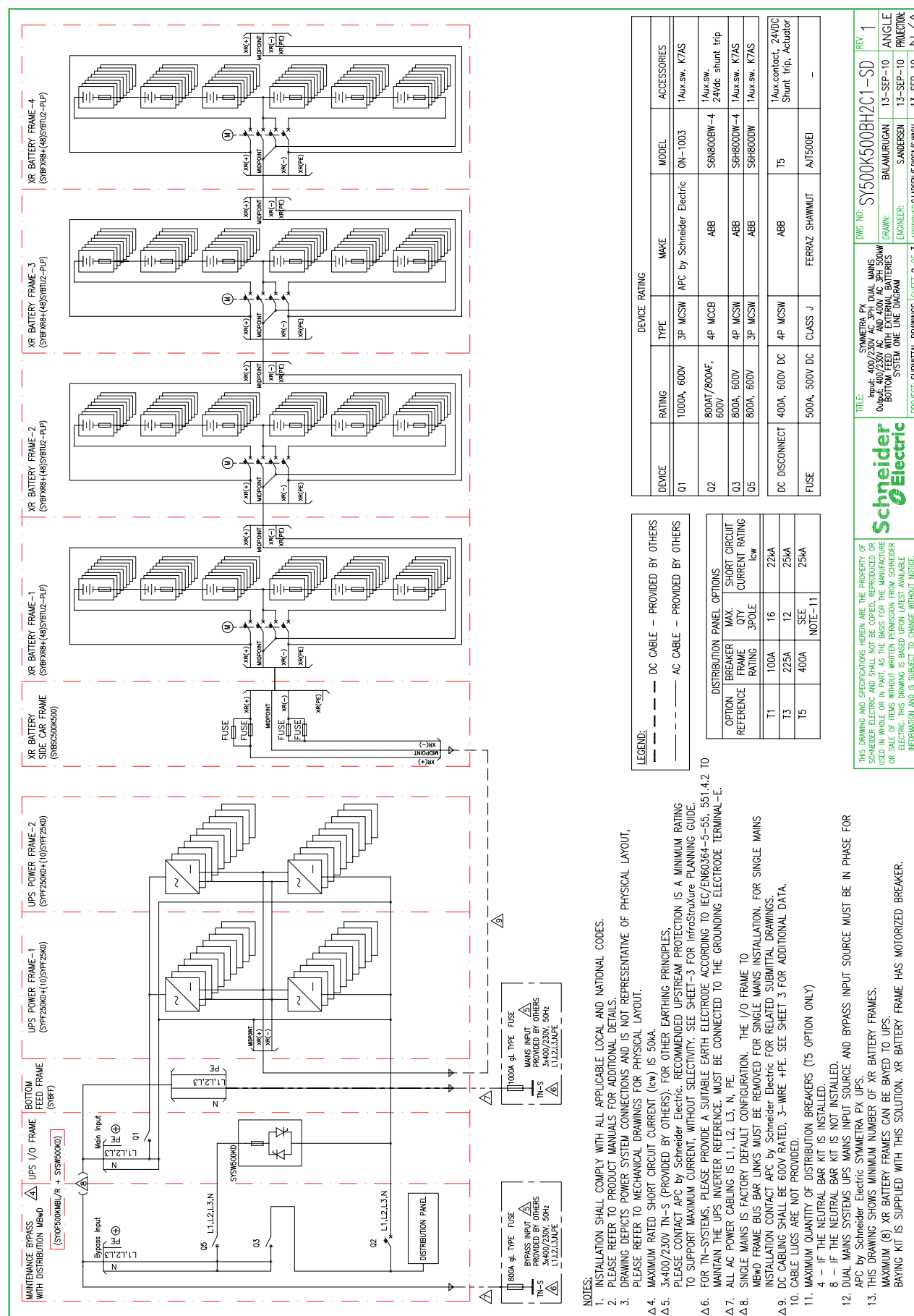
Symmetra PX 500 kW 400 V Single Utility/Mains with Maintenance Bypass and Remote Batteries – Bottom Feed



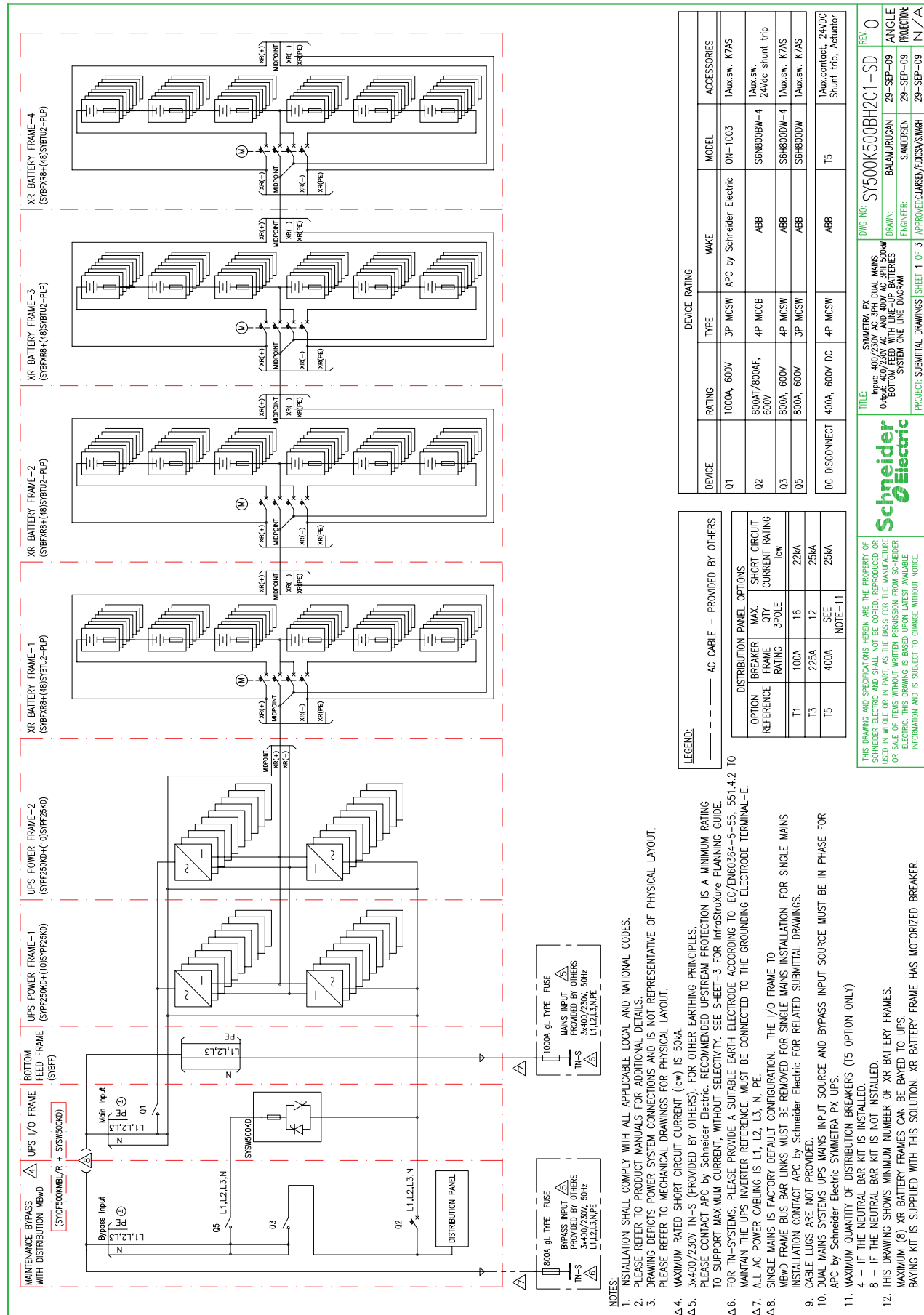
Symmetra PX 500 kW 400 V Dual Mains with Maintenance Bypass and Line-Up-And-Match Batteries – Top Feed



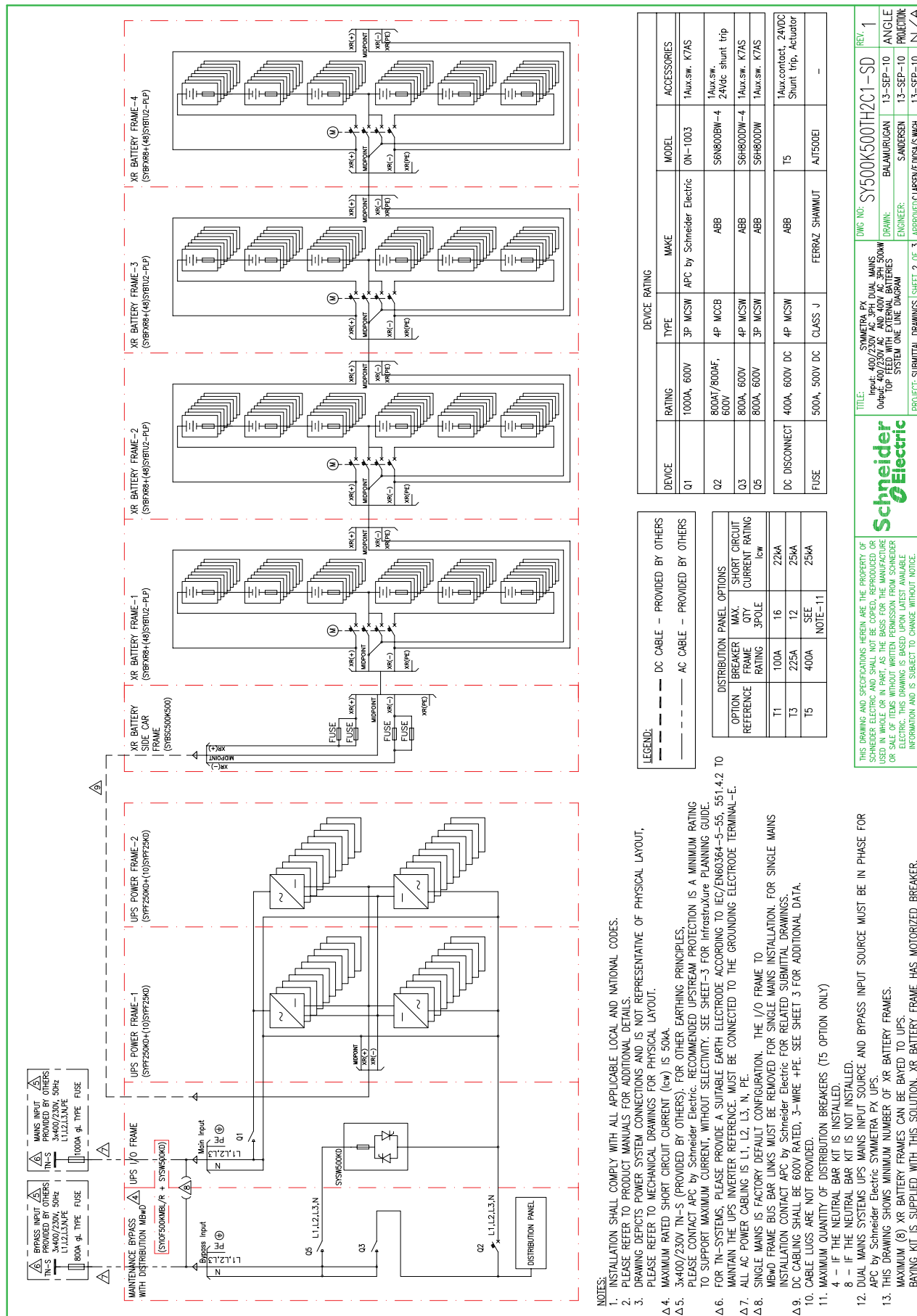
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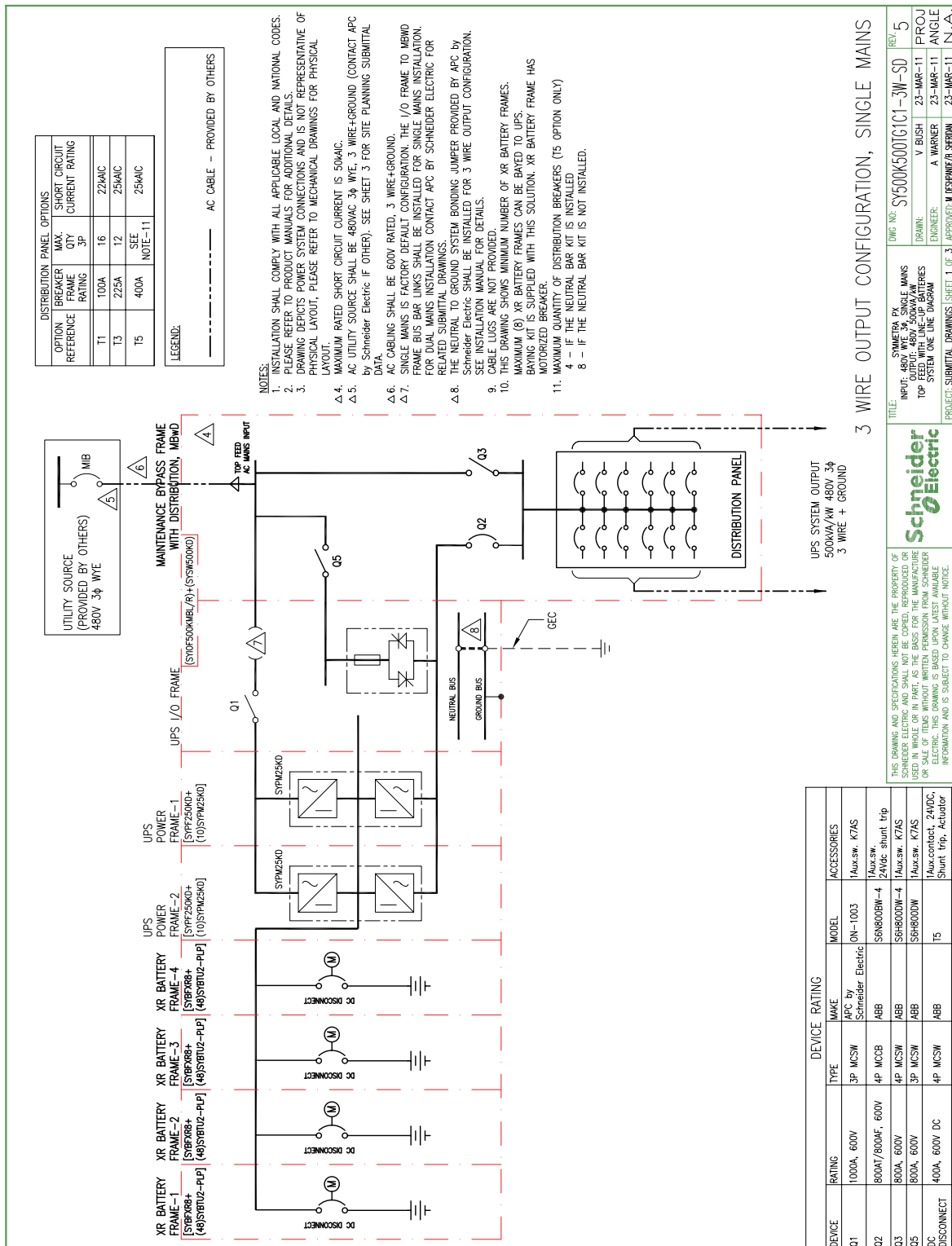
Symmetra PX 500 kW 400 V Dual Utility/Mains with Maintenance Bypass and Line-Up-And-Match Batteries – Bottom Feed



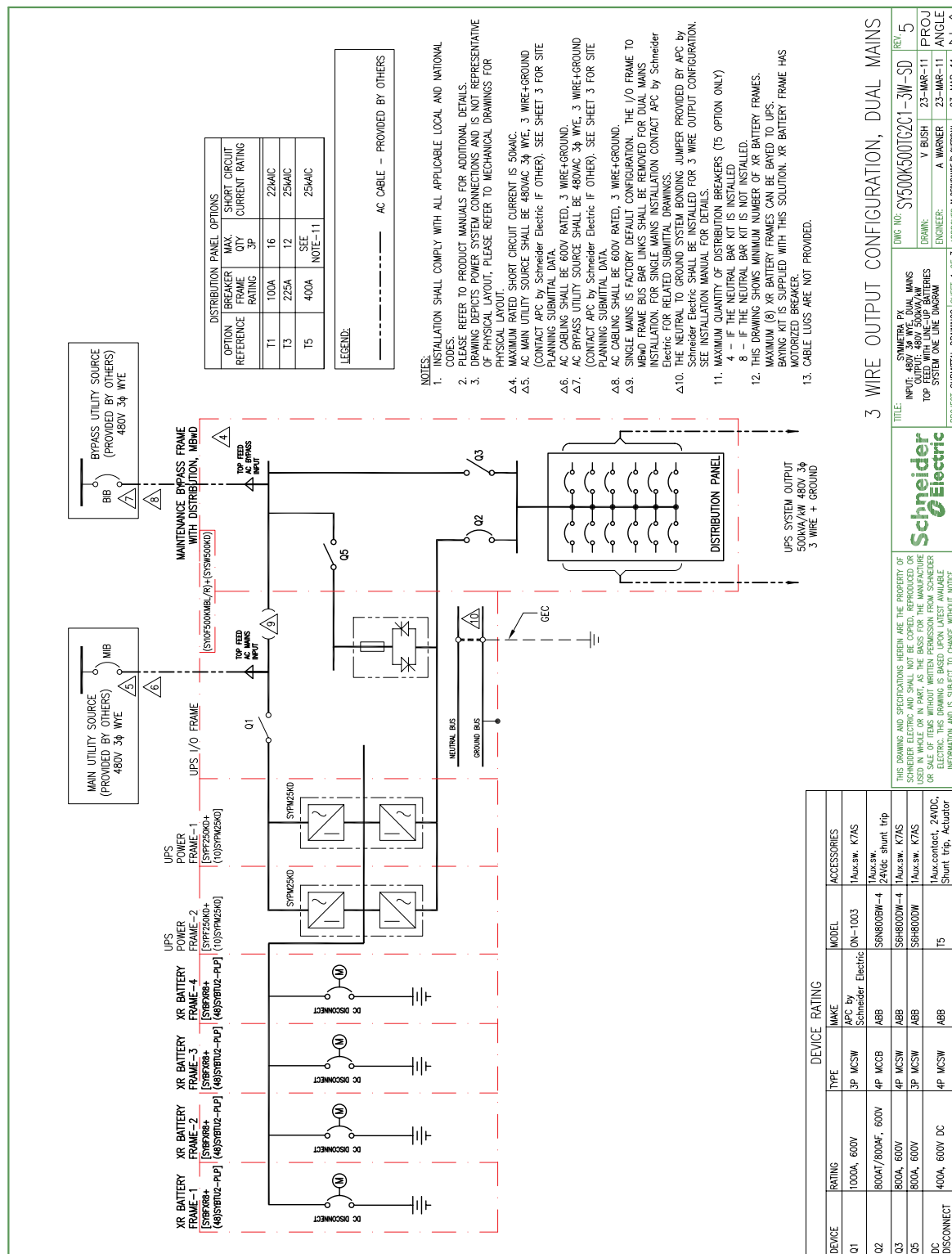
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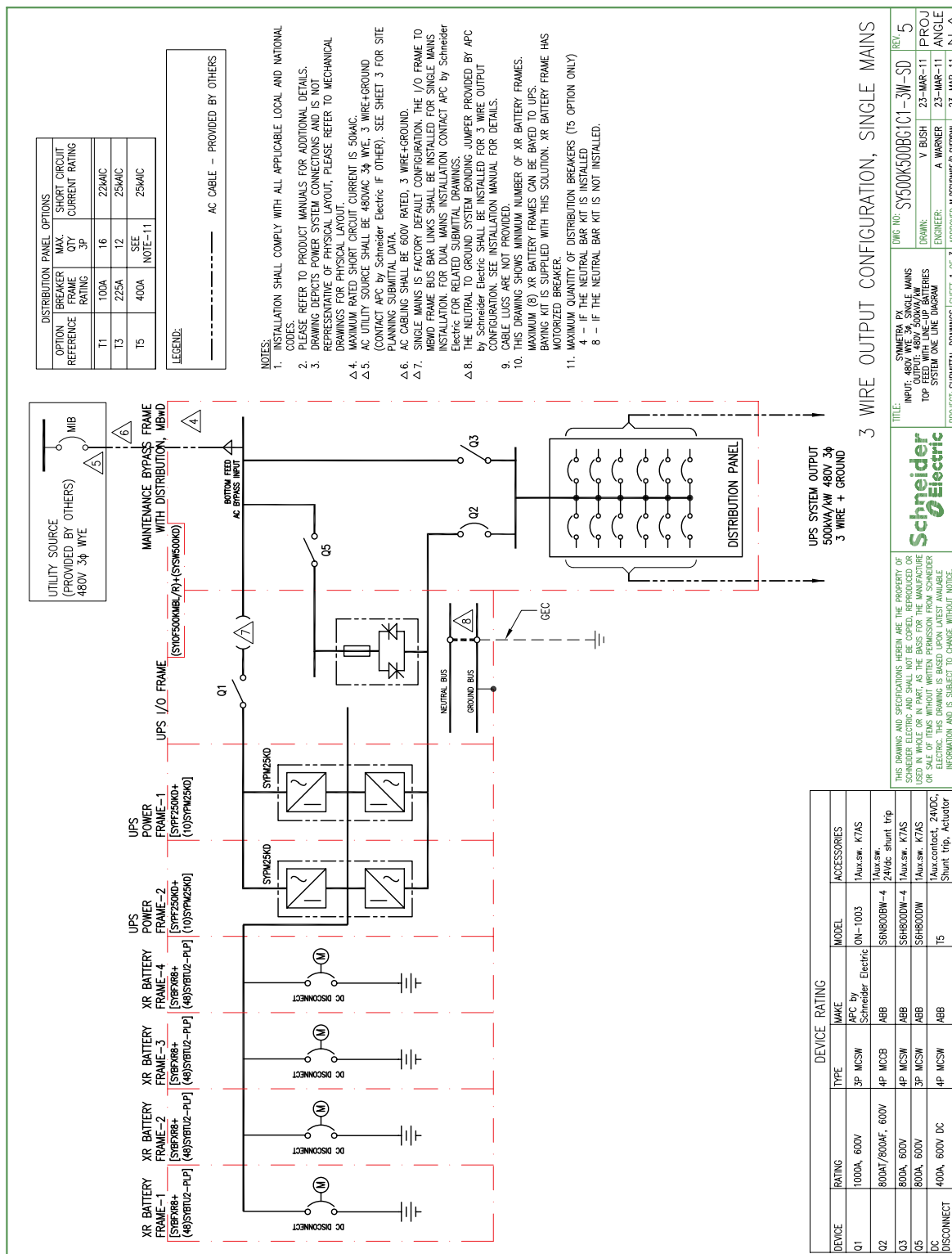
Symmetra PX 500 kW 480 V Single Mains with Maintenance Bypass (3 Wire Output) and Line-Up-And-Match Batteries – Top Feed



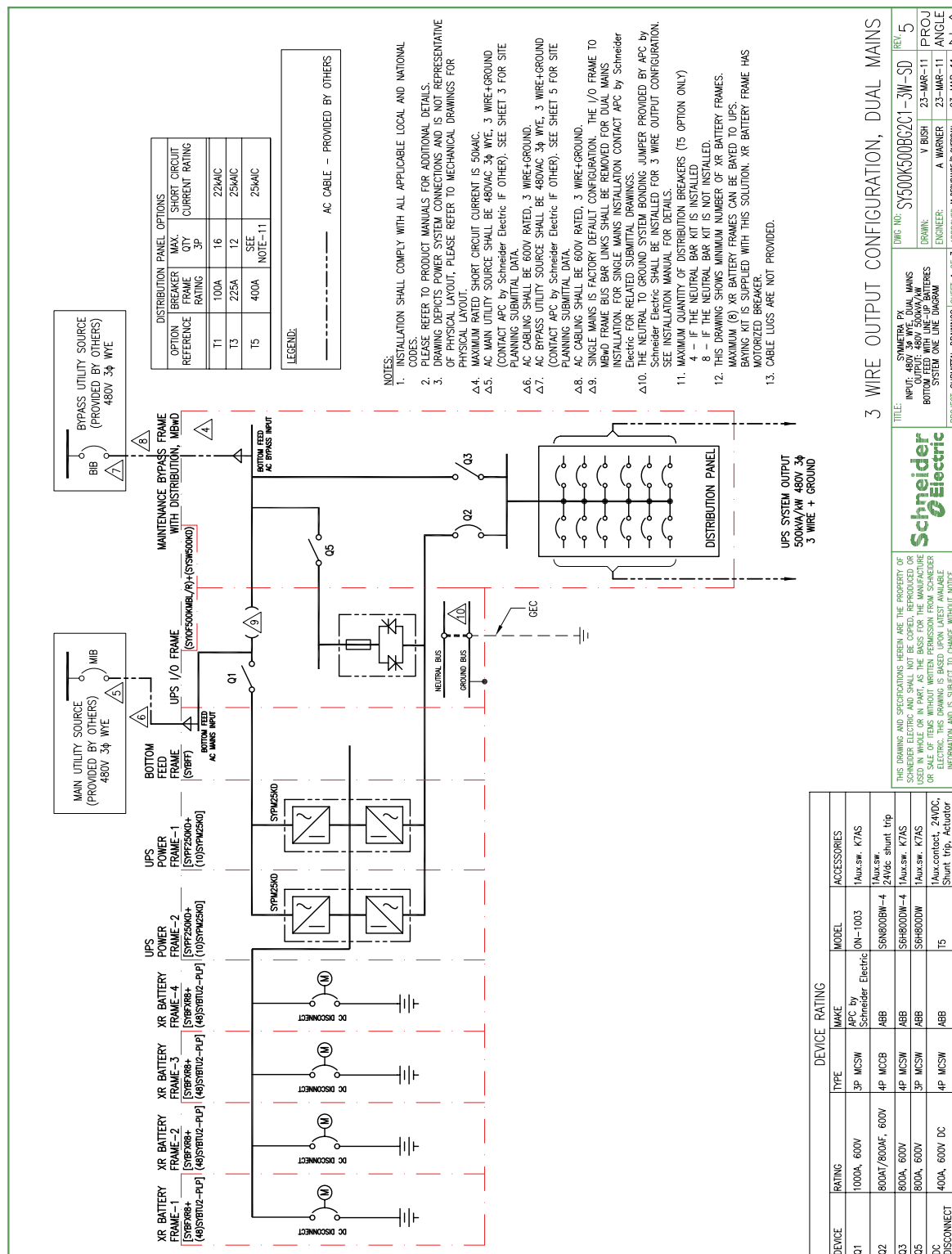
Symmetra PX 500 kW 480 V Dual Mains with Maintenance Bypass (3 Wire Output) and Line-Up-And-Match Batteries – Top Feed



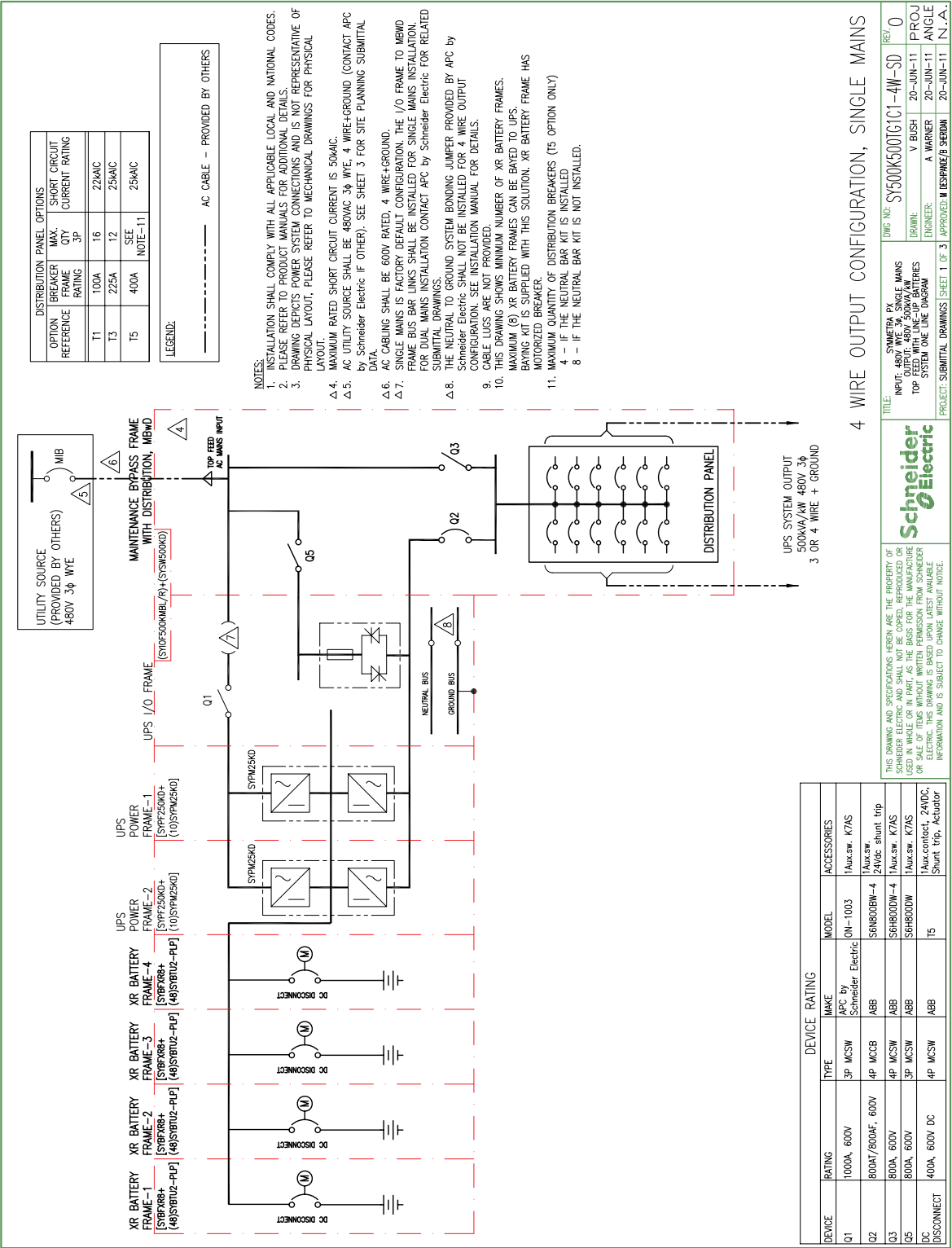
Symmetra PX 500 kW 480 V Single Mains with Maintenance Bypass (3 Wire Output) and Line-Up-And-Match Batteries – Bottom Feed



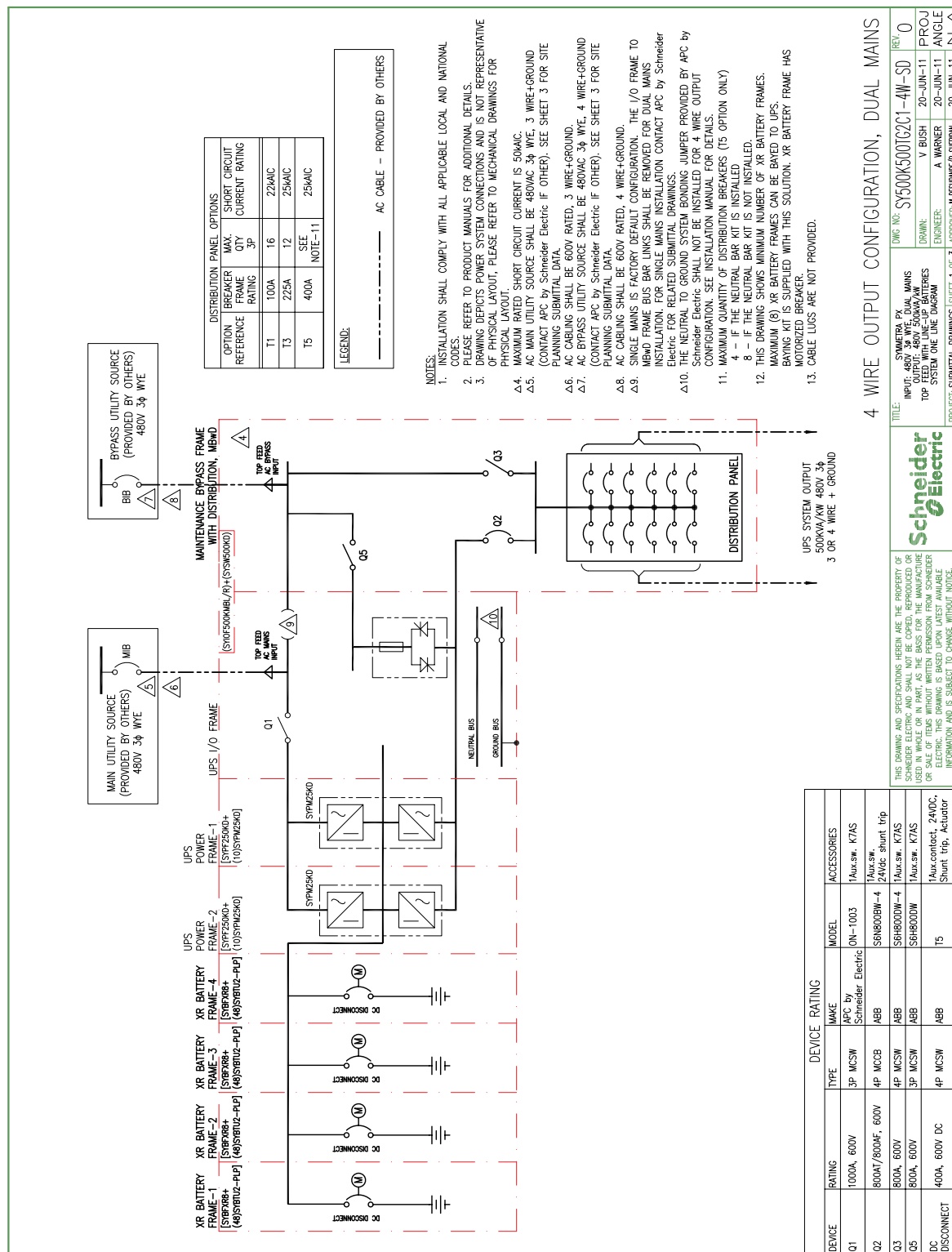
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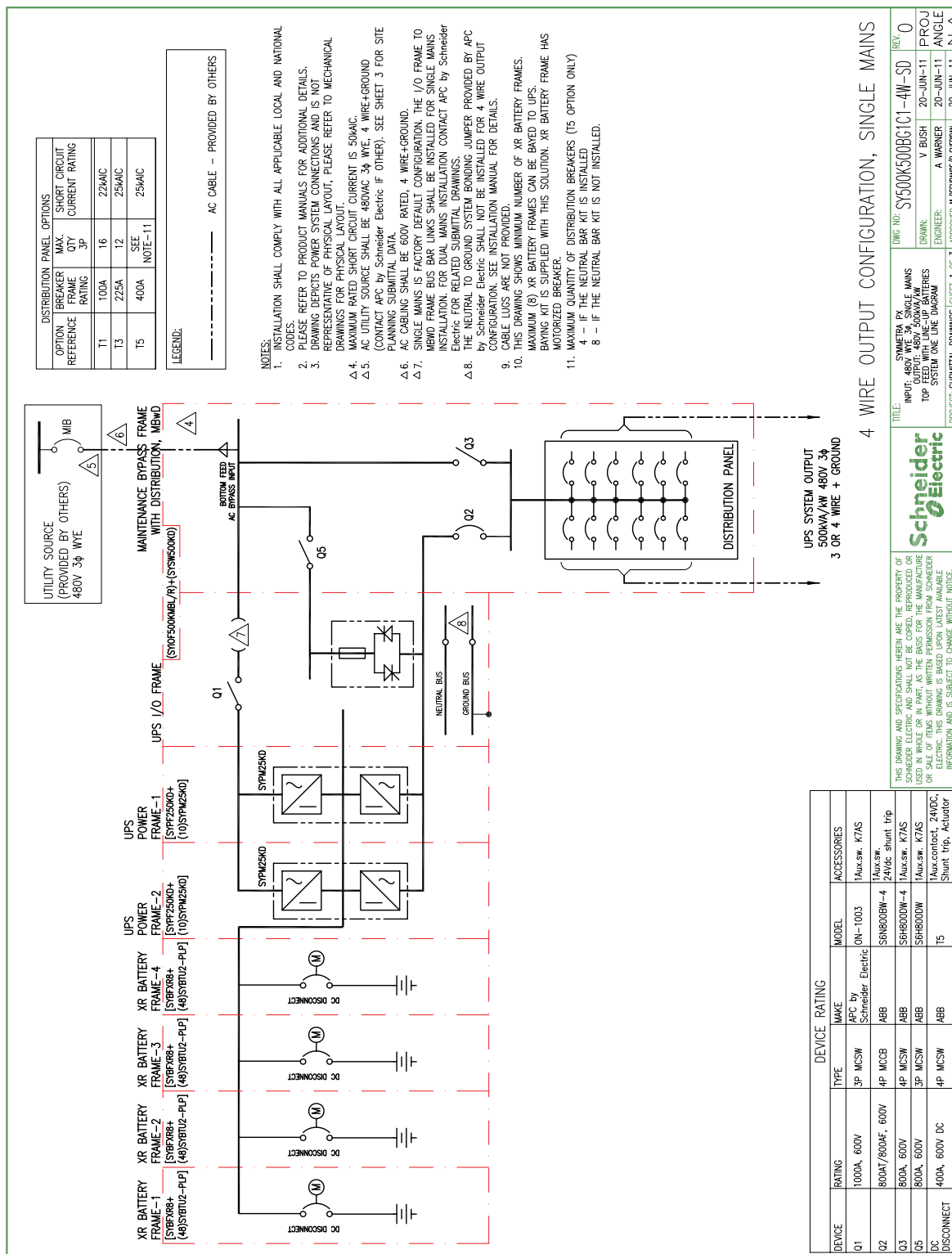
Symmetra PX 500 kW 480 V Single Mains with Maintenance Bypass (4 Wire Output) and Line-Up-And-Match Batteries – Top Feed



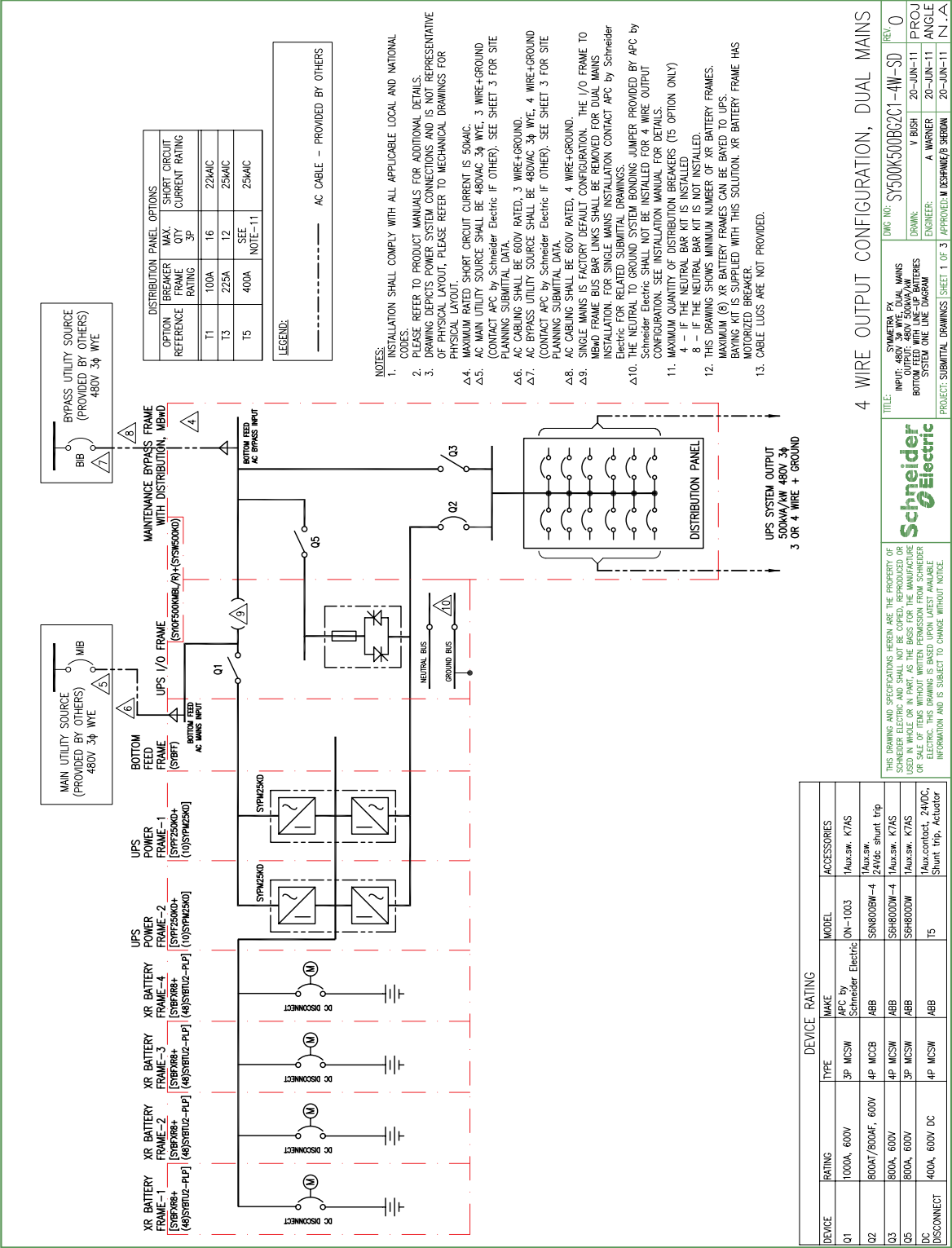
Symmetra PX 500 kW 480 V Dual Mains with Maintenance Bypass (4 Wire Output) and Line-Up-And-Match Batteries – Top Feed



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



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

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PROJECT: SUBMITTAL DRAWINGS SHEET 1 OF 3		DATE: 20-JUN-11 REV: 0		PROJECT: SUBMITTAL DRAWINGS SHEET 1 OF 3

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.

Schneider Electric Limited Factory Warranty

Three Phase Power Products or Cooling Solutions 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.

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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.

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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.

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