
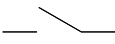


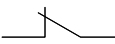
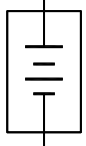

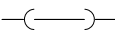

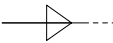
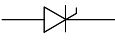






Symmetra PX 250kW Single Mains Top Entry 2 MOD with Line-up Modular Battery

Sheet No.	Component /Detail	Description
1	Draw ing Guide	Symmetra PX 250kW Single Mains Top Entry 2 MOD w ith Line-up Modular Battery Draw ing Guide
2	Solution Isometric	Symmetra PX 250kW Single Mains Top Entry 2 MOD w ith Line-up Modular Battery Solution Isometric
3	Run time Details	Symmetra PX 250kW Single Mains Top Entry 2 MOD w ith Line-up Modular Battery Runtime Details
4	Solution General Arrangements	Symmetra PX 250kW Single Mains Top Entry 2 MOD w ith Line-up Modular Battery Solution General Arrangements
5	Solution Anchoring Details	Symmetra PX 250kW Single Mains Top Entry 2 MOD w ith Line-up Modular Battery Solution Anchoring
6	UPS Frame Internal view s	Symmetra PX 250kW UPS Internal Details
7-9	Input-Output Frame Internal view s	Symmetra PX 250kW UPS Input Output Cabinet internal Details
10	Battery Frame Internal view s	Symmetra PX Battery Cabinet Internal View s
11-12	System One Line Diagram	Symmetra PX 250kW Single Mains Top Entry 2 MOD w ith Line-up Modular Battery System One Line Diagram
13	Site Planning data	Symmetra PX 250kW Single Mains Top Entry 2 MOD w ith Line-up Modular Battery Site Planning data
14	System Wiring Diagram	Symmetra PX 250kW Single Mains Top Entry 2 MOD w ith Line-up Modular Battery System Wiring Diagram

LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	CIRCUIT BREAKER		NORMALLY OPEN CONTACT		CONVERTER
	MOTORIZED CIRCUIT BREAKER		NORMALLY CLOSED CONTACT		BATTERY MODULE
	SWITCH DISCONNECT		BUS BAR LINK		INVERTER
	TERMINATION POINT		STATIC SWITCH		
	FUSE		LAMP		
	TERMINAL		PROTECTIVE EARTHING		

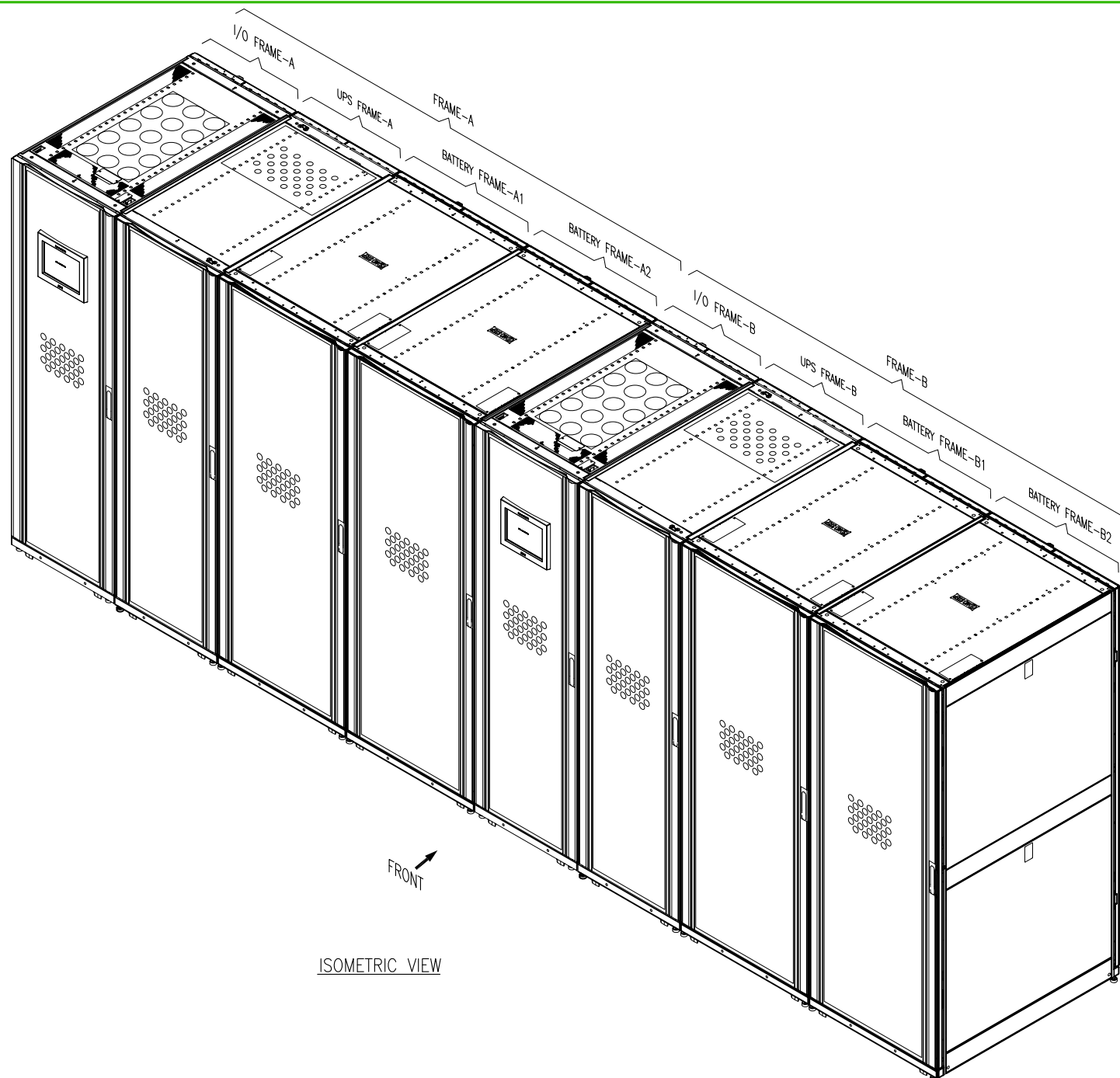
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Schneider
Electric

TITLE: SYMMETRA PX
Input: 400/230V AC 3PH SINGLE MAINS
Output: 400/230V AC 3PH 500kW
TOP ENTRY 2 MOD W/ LINE-UP MODULAR BATTERY
DRAWING GUIDE
PROJECT: DRAWINGS SHEET 1 OF 14

DWG NO: SY250K500TH1C2-LB
DRAWN: MAHARUDRAYYA 12-APR-12
ENGINEER: M.LEPARD/A.WARNER 12-APR-12
APPROVED: C.LARSEN/S.WAGH 12-APR-12

REV: 0
ANGLE
PROJECTION
N/A



NOTES:

1. INSTALLATION SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE AND LOCAL ELECTRICAL REGULATIONS.
2. REFER TO PRODUCT DOCUMENTATION FOR ADDITIONAL DETAILS PRIOR TO INSTALLATION AND SITE PREPARATION WORK.
3. CABLE ENTRY IS TOP OF UNIT.
4. FRONT AND REAR SERVICE ACCESS IS REQUIRED.

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Schneider
Electric

TITLE: SYMMETRA PX
Input: 400/230V AC 3PH SINGLE MAINS
Output: 400/230V AC 3PH 500kW
TOP ENTRY 2 MOD W/ LINE-UP MODULAR BATTERY
SOLUTION - ISOMETRIC
PROJECT: DRAWINGS **SHEET 2 OF 14**

DWG NO: SY250K500TH1C2-LB
DRAWN: BALAMURUGAN
ENGINEER: M.LEPARD/A.WARNER
APPROVED: S.ANDERSEN/S.WAGH

REV. 1
FIRST
ANGLE
PROJECTION

100 - 250kW TOP FEED SINGLE/DUAL MAINS 2 MODULE WITH LINE-UP BATTERIES (6min to 105min)

UPS rating	Total No. of In-Out Frames	Total No. of Power Frames	Total No. of Power Modules	Battery details for various runtime options																															
				6 min		8 min		10 min		12 min		15 min		20 min		25 min		30 min		40 min		50min		60min		70min		80min		90min		100min		105min	
				Total No. of Battery Frames	Total No. of Battery Modules	Total No. of Battery Frames	Total No. of Battery Modules	Total No. of Battery Frames	Total No. of Battery Modules	Total No. of Battery Frames	Total No. of Battery Modules	Total No. of Battery Frames	Total No. of Battery Modules	Total No. of Battery Frames	Total No. of Battery Modules	Total No. of Battery Frames	Total No. of Battery Modules	Total No. of Battery Frames	Total No. of Battery Modules	Total No. of Battery Frames	Total No. of Battery Modules	Total No. of Battery Frames	Total No. of Battery Modules	Total No. of Battery Frames	Total No. of Battery Modules	Total No. of Battery Frames	Total No. of Battery Modules	Total No. of Battery Frames	Total No. of Battery Modules	Total No. of Battery Frames	Total No. of Battery Modules	Total No. of Battery Frames	Total No. of Battery Modules		
2x(100kVA/100KW)	2	2	8	2	14	2	16	4	18	4	20	4	24	4	28	6	34	6	38	6	48	8	58	8	66	10	74	12	82	12	90	12	98	14	102
2x(125kVA/125kW)	2	2	10	2	16	4	20	4	22	4	26	4	30	6	36	6	42	6	48	8	60	10	72	10	82	12	92	14	104	14	114	16	124	16	128
2x(150kVA/150kW)	2	2	12	4	20	4	24	4	26	4	30	6	36	6	42	8	50	8	58	10	72	12	86	12	98	14	112	16	124	N/A	N/A	N/A	N/A	N/A	N/A
2x(200kVA/200kW)	2	2	16	4	26	4	32	6	36	6	40	6	46	8	56	10	66	10	76	12	96	14	114	16	130	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2x(250kVA/250kW)	2	2	20	4	32	6	38	6	44	8	50	8	58	10	70	12	84	12	96	16	118	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

NOTES:

1. INSTALLATION SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE AND LOCAL ELECTRICAL REGULATIONS.
2. REFER TO PRODUCT DOCUMENTATION FOR ADDITIONAL DETAILS PRIOR TO INSTALLATION AND SITE PREPARATION WORK.
3. FOR POWER LEVELS/CONFIGURATIONS NOT DETAILED PLEASE CONTACT CONFIGURATION ENGINEERING.
4. SOLUTION WEIGHT INCLUDES 250kW STATIC SWITCH.
- △ 5. BATTERY RUN TIMES ARE THEORETICAL AND CALCULATED BASED ON DATA PROVIDED BY BATTERY MANUFACTURER ASSUMING OPTIMUM ENVIRONMENT AND LOAD CONDITIONS.

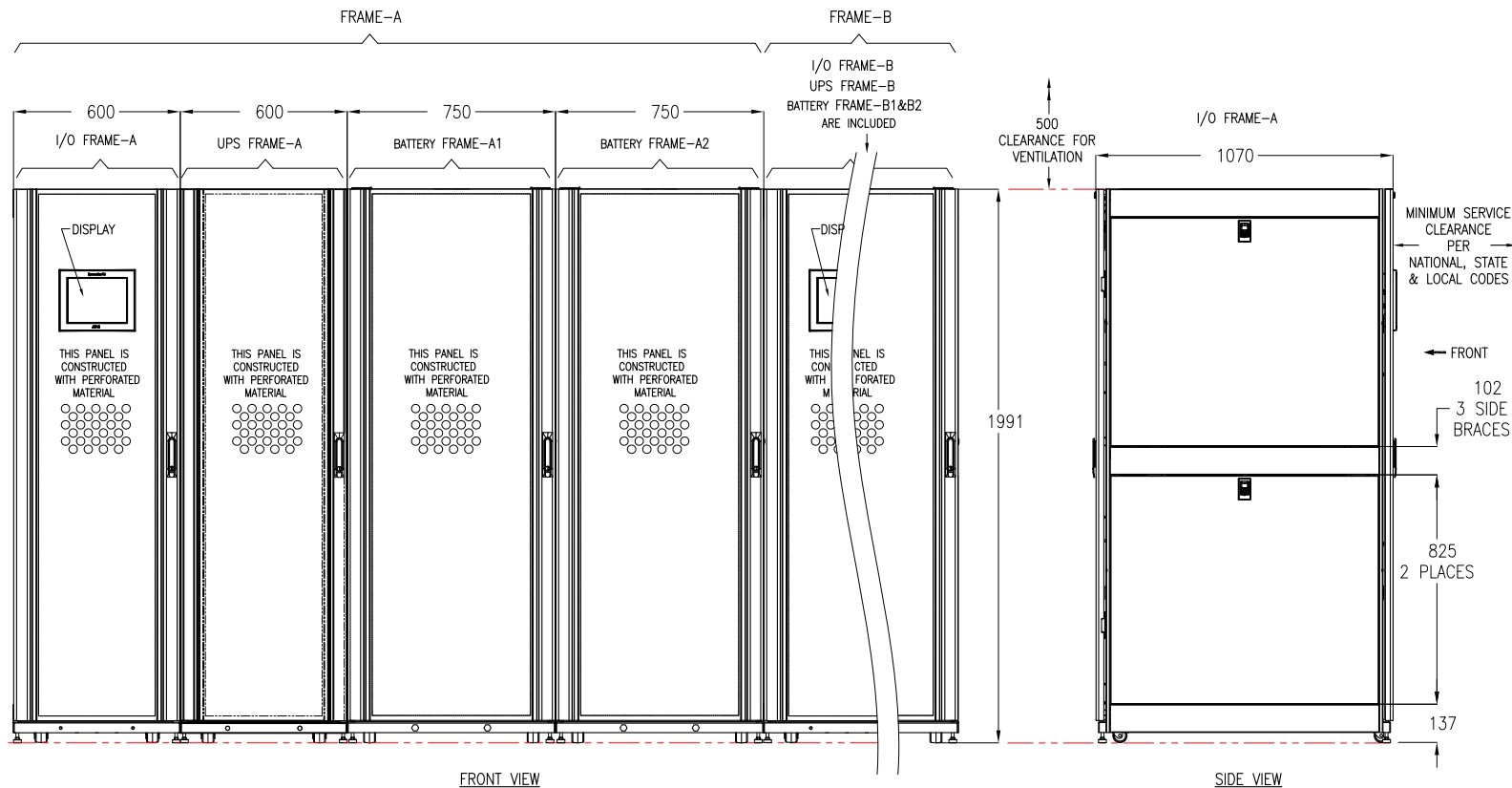
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Schneider
Electric

TITLE: SYMMETRA PX
Input: 400/230V AC 3PH SINGLE MAINS
Output: 400/230V AC 3PH 500kW
TOP ENTRY 2 MOD W/ LINE-UP MODULAR BATTERY
SOLUTION RUNTIME DETAILS
PROJECT: DRAWINGS **SHEET** 3 OF 14

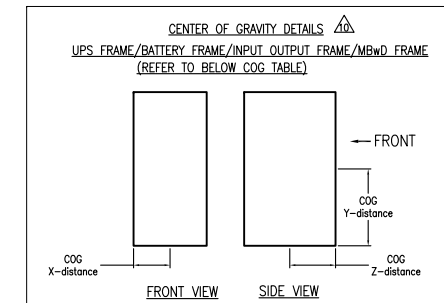
DWG NO: SY250K500TH1C2-LB
DRAWN: MAHARUDRAYYA 12-APR-12
ENGINEER: M.LEPARD/A.WARNER 12-APR-12
APPROVED: C.LARSEN/S.WAGH 12-APR-12

REV. 0
ANGLE
PROJECTION N/A

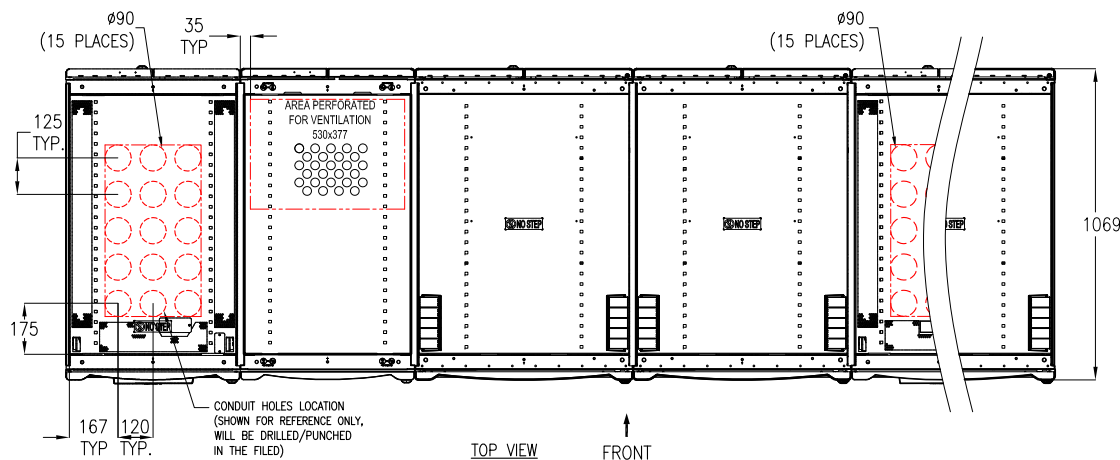


- NOTES:
1. INSTALLATION SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE AND LOCAL ELECTRICAL REGULATIONS.
 2. REFER TO [PRODUCT DOCUMENTATION](#) FOR ADDITIONAL DETAILS PRIOR TO INSTALLATION AND SITE PREPARATION WORK.
 3. ALL DIMENSIONS ARE IN MILLIMETERS.
 4. WEIGHT PER FRAME(UNPOPULATED)

BATTERY FRAME	373.60kg
UPS FRAME	242.73kg
I/O FRAME	332.00kg
250KW SSW	79.00kg
 5. CABLE ENTRY IS TOP OF UNIT.
 6. ENCLOSURE PROTECTION CLASS : NEMA1, IP20.
 7. FRONT SERVICE CLEARANCE AND TOP VENTILATION CLEARANCE REQUIRED AS SHOWN.
 8. OPERATING TEMPERATURE: 0 TO 40°C.
 9. COLOR : BLACK.
 10. THIS INFORMATION PROVIDES APPROXIMATE CENTER OF GRAVITY CALCULATION.
 11. REQUIREMENTS FOR BACK TO BACK SYMMETRA PX250/500 UPS INSTALLATIONS.
 - TO ENSURE PROPER AIR FLOW, YOU MUST INSTALL A PLEXIGLAS FRENCH DOOR KIT (0H-0242) AT THE REAR OF EACH POWER FRAME AND I/O FRAME IN ONE OF THE TWO SYSTEMS.
 - TO PREVENT BATTERIES FROM BEING OVERHEATED BY HOT AIR FROM POWER FRAMES, BATTERY FRAMES MUST BE INSTALLED BACK TO BACK AND POWER FRAMES MUST BE INSTALLED BACK TO BACK.



COG TABLE			
CENTER OF GRAVITY	BATTERY FRAME	UPS FRAME	I/O FRAME
X - DISTANCE	375mm	326.4mm	329.2mm
Y - DISTANCE	995mm	1070.3mm	533.5mm
Z - DISTANCE	570mm	423mm	788.5mm



Floor Loading Data (Fully Populated unit)				
Description	SKU Reference	Dimensions H x W x D mm	Weight in Kg	Floor Loading kg / sq. m
BATTERY FRAME	SYBFXR8-8	1991x750x1070	1595	1988
UPS FRAME	SYPF250KD with 10 Power Modules	1991x600x1070	675	1051
I/O FRAME	SYIOF500KD with 250kW Static Switch	1991x600x1070	411	640

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Schneider Electric

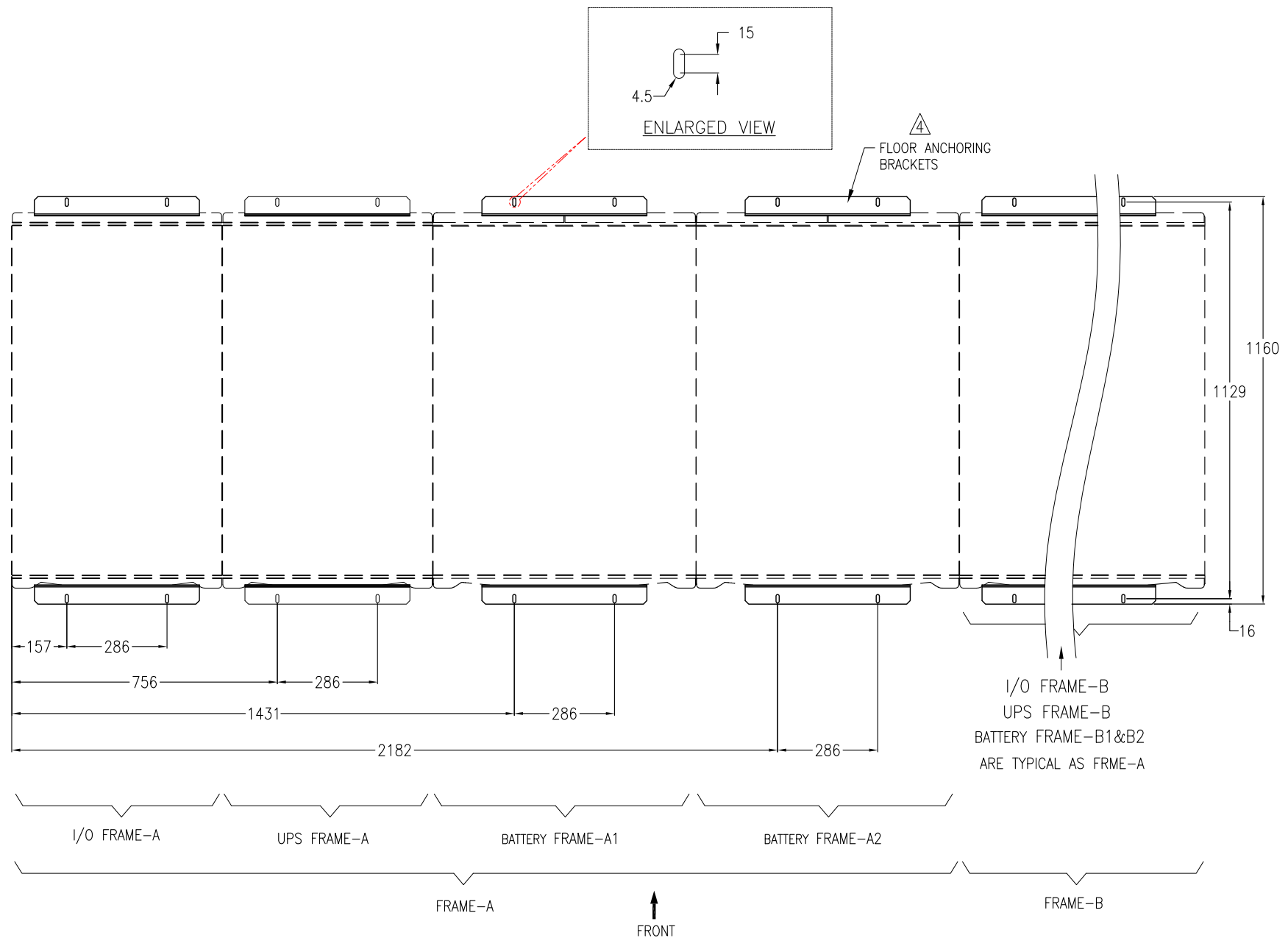
TITLE: SYMMETRA PX
Input: 400/230V AC 3PH SINGLE MAINS
Output: 400/230V AC 3PH 500KW
TOP ENTRY 2 MOD W/ LINE-UP MODULAR BATTERY SOLUTION - GENERAL ARRANGEMENTS

PROJECT: DRAWINGS SHEET 4 OF 14

DWG NO: SY250K500TH1C2-LB

DRAWN: JAYAPRAKASH 18-FEB-16
ENGINEER: S.ANDERSEN 18-FEB-16
APPROVED: S.ANDERSEN 18-FEB-16

REV. 2
FIRST ANGLE PROJECTION



NOTES:

1. INSTALLATION SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE AND LOCAL ELECTRICAL REGULATIONS.
2. REFER TO PRODUCT DOCUMENTATION FOR ADDITIONAL DETAILS PRIOR TO INSTALLATION AND SITE PREPARATION WORK.
3. ALL DIMENSIONS ARE IN MILLIMETERS.
- △ 4. FLOOR ANCHORING BRACKETS CAN BE USED TO ANCHOR ENCLOSURE. USE CODE COMPLIANT FASTENERS TO SECURE THE UNIT. IF REAR BRACKET IS USED. 760mm REAR CLEARANCE IS REQUIRED FOR INSTALLATION.

FLOOR ANCHORING DETAILS

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Schneider
Electric

TITLE: SYMMETRA PX
Input: 400/230V AC 3PH SINGLE MAINS
Output: 400/230V AC 3PH 500kW
TOP ENTRY 2 MOD W/ LINE-UP MODULAR BATTERY
SOLUTION - ANCHORING DETAILS
PROJECT: DRAWINGS SHEET 5 OF 14

DWG NO: SY250K500TH1C2-LB
DRAWN: MAHARUDRAYYA
ENGINEER: M.LEPARD/A.WARNER
APPROVED: C.LARSEN/S.WAGH

REV: 0
FIRST
ANGLE
PROJECTION

FRONT →

213
L1 in
L2 in
L3 in
DC +
Neutral
DC -
L1 Out
L2 Out
L3 Out

RIGHT SIDE VIEW
(COVERS REMOVED)

993

POWER MODULES
(EACH WITH 2-INTAKE FANS)

POWER MODULES
(EACH WITH 2-INTAKE FANS)

FRONT VIEW
(DOOR REMOVED)

NOTES:

1. INSTALLATION SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE AND LOCAL ELECTRICAL REGULATIONS.
2. REFER TO PRODUCT DOCUMENTATION FOR ADDITIONAL DETAILS PRIOR TO INSTALLATION AND SITE PREPARATION WORK.
3. ALL DIMENSIONS ARE IN MILLIMETERS.
4. SOME STRUCTURAL DETAILS HAVE BEEN OMITTED FOR THE PURPOSE OF CLARITY.
5. EITHER 600mm OR 750mm WIDE PLENUM WILL BE SUPPLIED AS PER RACK CONFIGURATION.

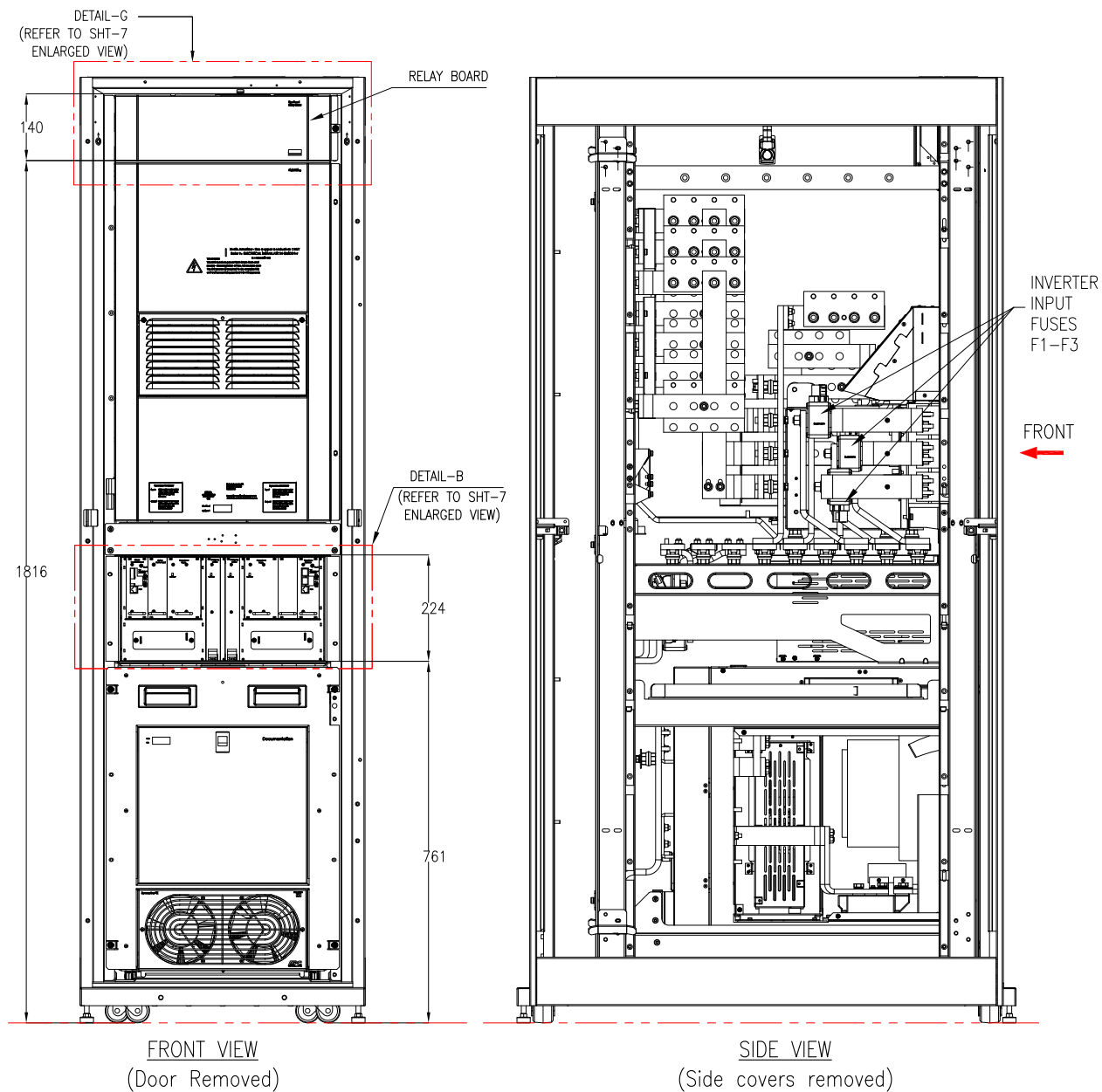
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Schneider
Electric

TITLE: SYMMETRA PX
Input: 400/230V AC 3PH SINGLE MAINS
Output: 400/230V AC 3PH 500kW
TOP ENTRY 2 MOD W/ LINE-UP MODULAR BATTERY
UPS POWER FRAME INTERNAL VIEW
PROJECT: DRAWINGS SHEET 6 OF 14

DWG NO: SY250K500TH1C2-LB
DRAWN: MAHARUDRAYYA 12-APR-12
ENGINEER: M.LEPARD/A.WARNER 12-APR-12
APPROVED: C.LARSEN/S.WAGH 12-APR-12

REV: 0
FIRST
ANGLE
PROJECTION

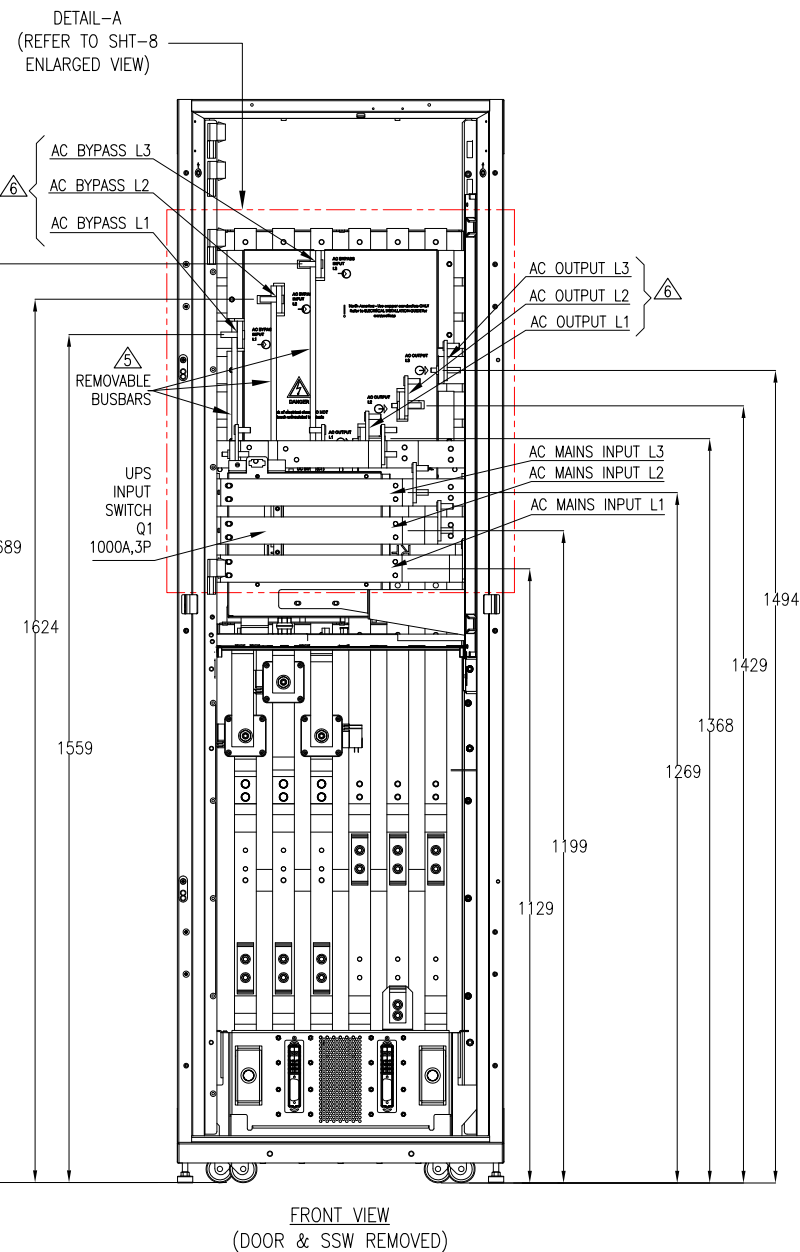


NOTES:

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2. REFER TO PRODUCT DOCUMENTATION FOR ADDITIONAL DETAILS PRIOR TO INSTALLATION AND SITE PREPARATION WORK.
3. ALL DIMENSIONS ARE IN MILLIMETERS.
4. SOME STRUCTURAL DETAILS HAVE BEEN OMITTED FOR THE PURPOSE OF CLARITY.
- △ 5. SINGLE MAINS IS FACTORY DEFAULT CONFIGURATION. BUS BAR LINKS MUST BE PRESENT FOR SINGLE MAINS INSTALLATION.

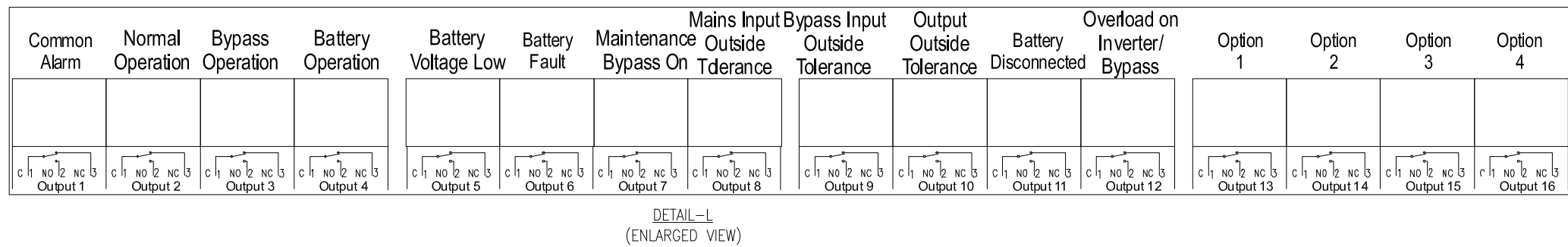
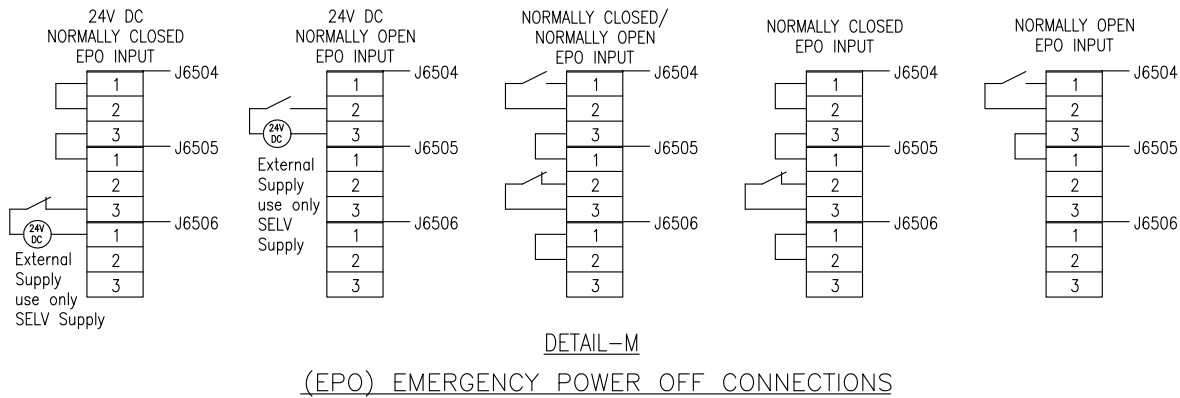
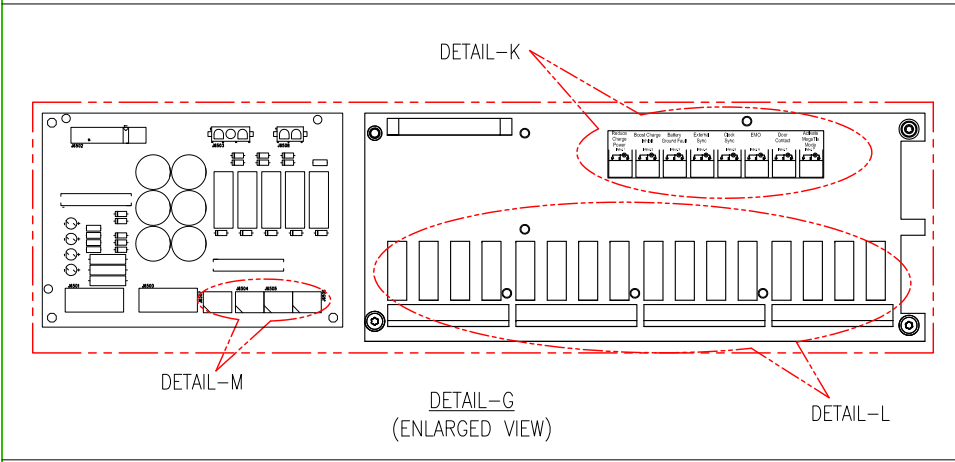
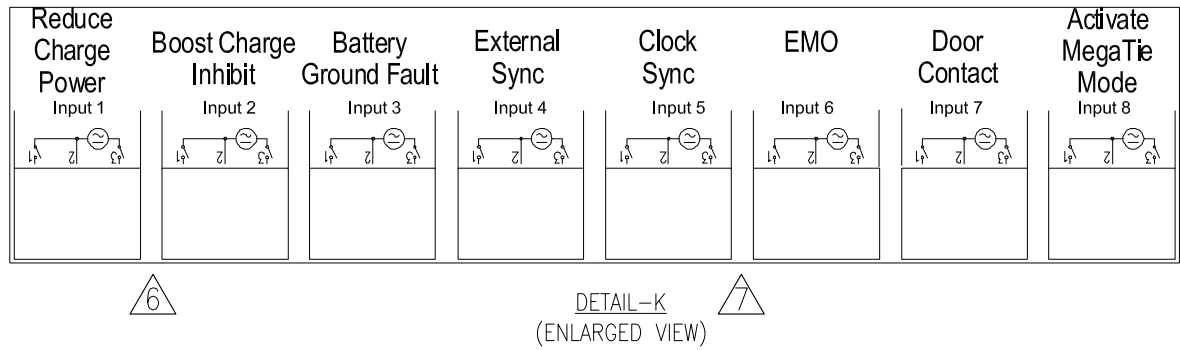
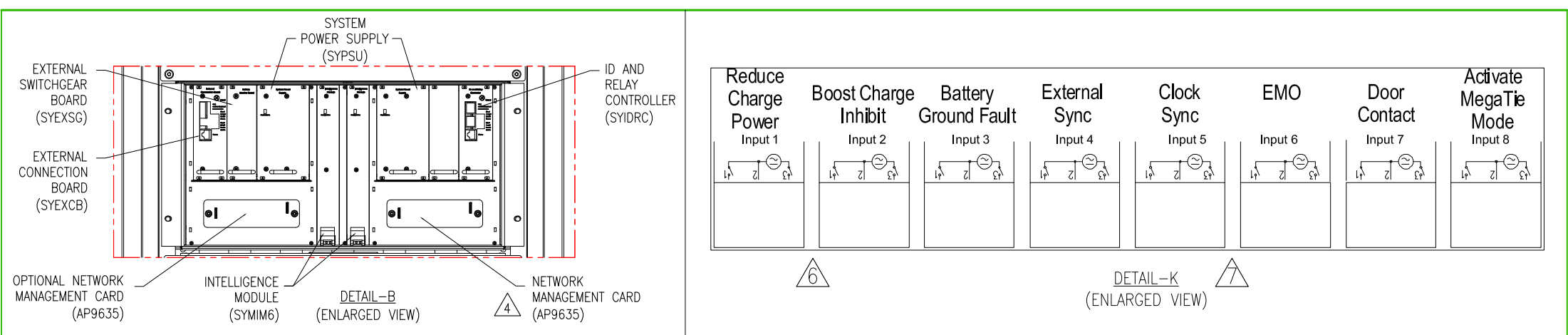
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Schneider
Electric



TITLE: SYMMETRA PX
Input: 400/230V AC 3PH SINGLE MAINS
Output: 400/230V AC 3PH 500kW
TOP ENTRY 2 MOD W/ LINE-UP MODULAR BATTERY
UPS INPUT-OUTPUT FRAME INTERNAL VIEW
PROJECT: DRAWINGS SHEET 7 OF 14

DWG NO: SY250K500TH1C2-LB
DRAWN: BALAMURUGAN
ENGINEER: M.LEPARD/A.WARNER
APPROVED: S.ANDERSEN/S.WAGH
REV. 1
23-JAN-15
23-JAN-15
23-JAN-15
FIRST ANGLE PROJECTION



NOTES:

1. INSTALLATION SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE AND LOCAL ELECTRICAL REGULATIONS.
2. REFER TO PRODUCT DOCUMENTATION FOR ADDITIONAL DETAILS PRIOR TO INSTALLATION AND SITE PREPARATION WORK.
3. ALL DIMENSIONS ARE IN MILLIMETERS.
- △ 4. ONLY ONE NMC (NETWORK MANAGEMENT CARD) IS INSTALLED AS STANDARD. THE OTHER NMC IS OPTIONAL.
5. OUTPUT RELAYS SPECIFICATION-MAXIMUM CURRENT ACCEPTED BY EACH OUTPUT RELAY IS 7.2A/250VAC.

△ 6. PLACE A JUMPER OR CONTROL SIGNAL BETWEEN PIN 1&2, IF EXTERNAL SYNCHRONIZATION FEATURE IS USED.

△ 7. INPUTS 5 AND 6 ARE RESERVED FOR FUTURE USE.

8. INPUT RELAYS SPECIFICATION-MINIMUM 12VAC/DC, MAX. 28VAC/40VDC, ALL INPUTS MUST BE FROM THE SAME SOURCE.

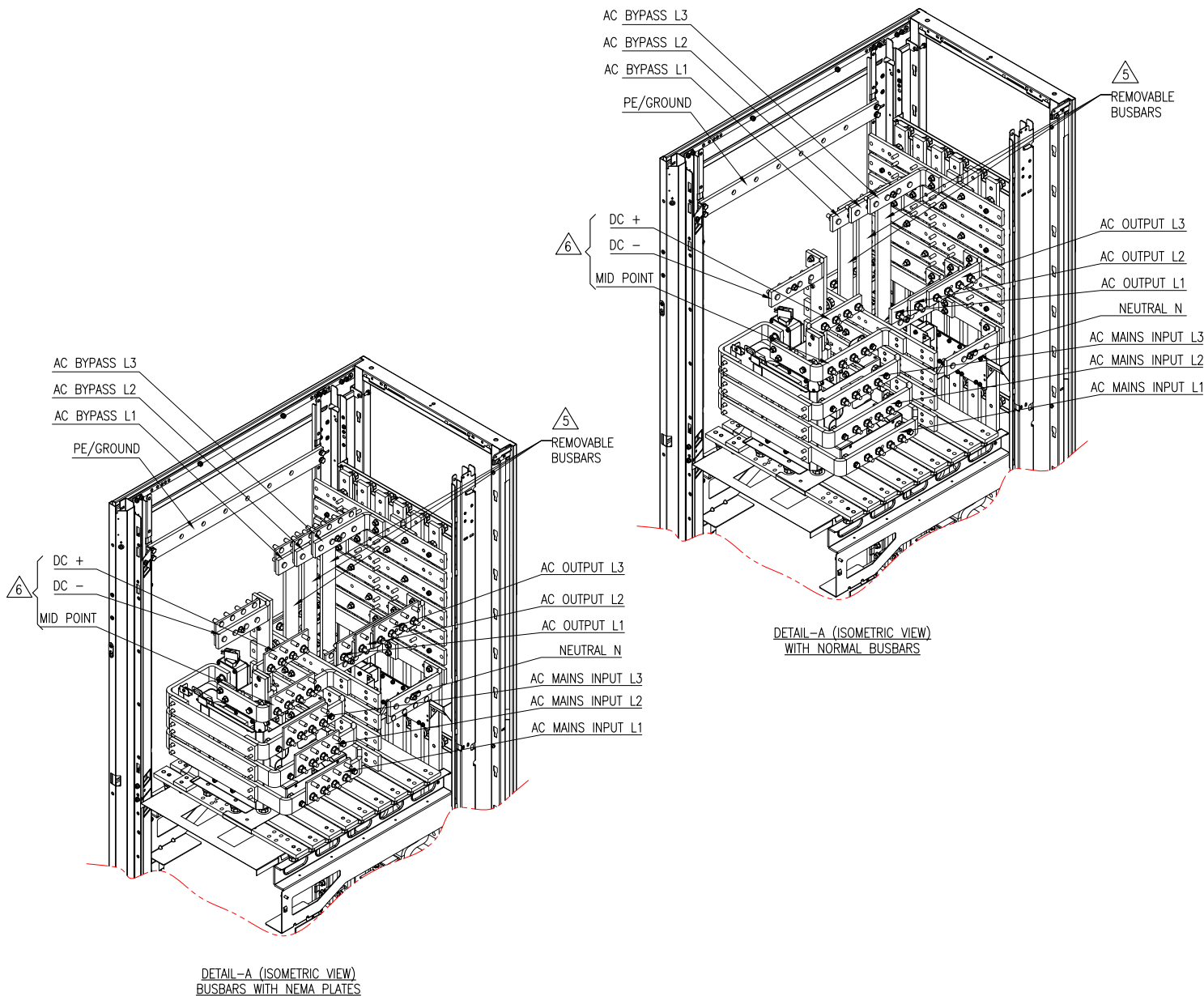
9. ALL WIRING TO THE RELAY BOARD SHOULD BE CONSIDERED AS FIELD WIRING RATED MINIMUM 480V AC, AND MUST USE COPPER CONDUCTORS ONLY.

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Schneider Electric

TITLE: SYMMETRA PX
Input: 400/230V AC 3PH SINGLE MAINS
Output: 400/230V AC 3PH 500kW
TOP ENTRY 2 MOD W/ LINE-UP MODULAR BATTERY
UPS INPUT-OUTPUT FRAME INTERNAL DETAILS
PROJECT: DRAWINGS SHEET 8 OF 14

DWG NO: SY250K500TH1C2-LB REV. 2
DRAWN: JAYAPRAKASH 18-FEB-16
ENGINEER: S.ANDERSEN 18-FEB-16
APPROVED: S.ANDERSEN 18-FEB-16
FIRST ANGLE PROJECTION



NOTES:

1. INSTALLATION SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE AND LOCAL ELECTRICAL REGULATIONS.
2. REFER TO PRODUCT DOCUMENTATION FOR ADDITIONAL DETAILS PRIOR TO INSTALLATION AND SITE PREPARATION WORK.
3. ALL DIMENSIONS ARE IN MILLIMETERS.
4. SOME STRUCTURAL DETAILS HAVE BEEN OMITTED FOR THE PURPOSE OF CLARITY.
- △5. SINGLE MAINS IS FACTORY DEFAULT CONFIGURATION. BUS BAR LINKS MUST BE PRESENT FOR SINGLE MAINS INSTALLATION
- △6. NOT REQUIRED FOR LINE UP & MATCH BATTERY SOLUTION. ONLY USED FOR REMOTE XR BATTERY CABINETS OR FOR THIRD PARTY BATTERY SOLUTIONS.

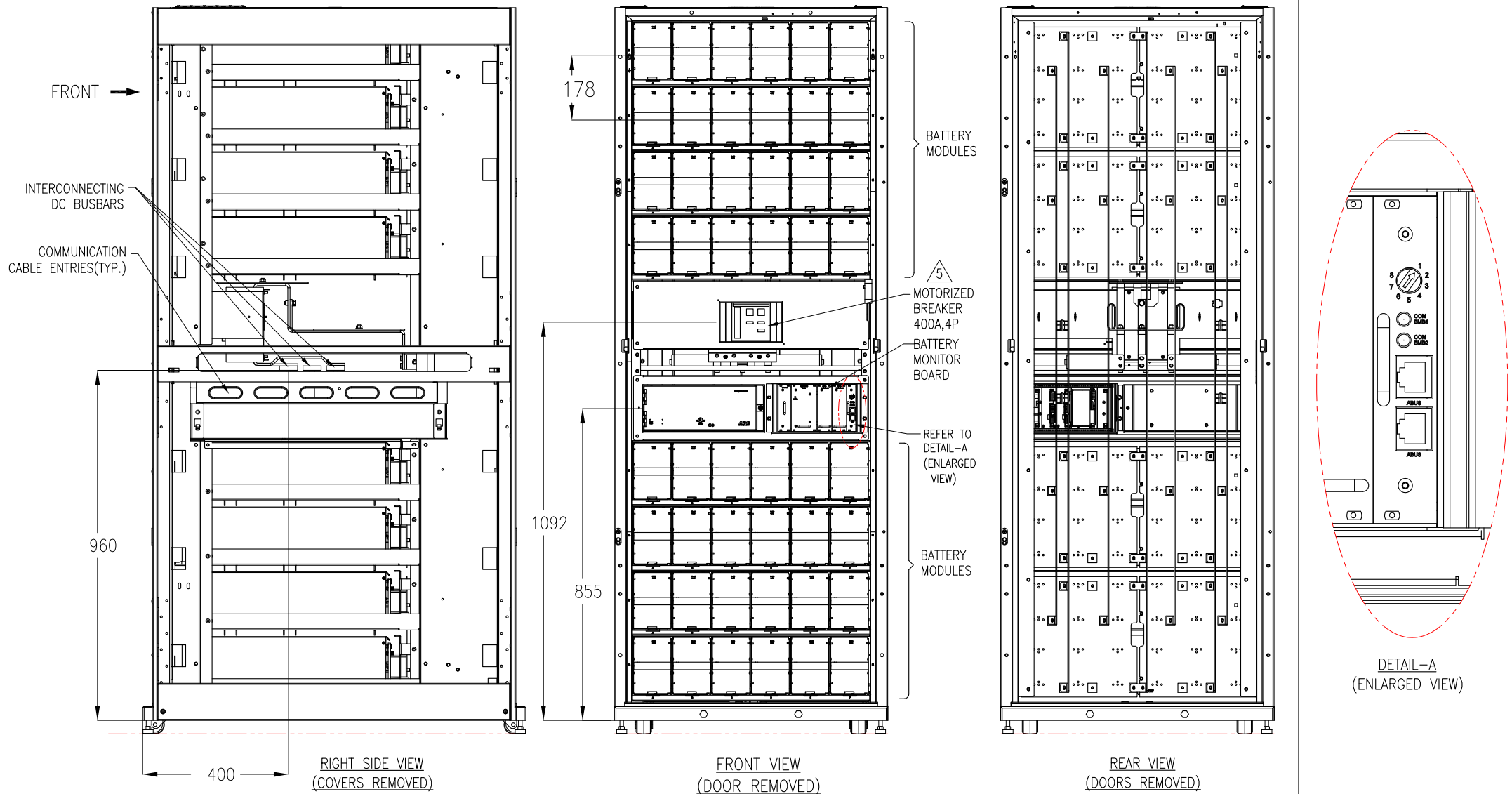
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Schneider
Electric

TITLE: SYMETRA PX
Input: 400/230V AC 3PH SINGLE MAINS
Output: 400/230V AC 3PH 500kW
TOP ENTRY 2 MOD W/ LINE-UP MODULAR BATTERY
UPS INPUT-OUTPUT FRAME INTERNAL ISOMETRIC
PROJECT: DRAWINGS **SHEET** 9 **OF** 14

DWG NO: SY250K500TH1C2-LB
DRAWN: BALAMURUGAN
ENGINEER: M.LEPARD/A.WARNER
APPROVED: S.ANDERSEN/S.WAGH

REV. 2
FIRST
ANGLE
PROJECTION



NOTES:

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2. REFER TO PRODUCT DOCUMENTATION FOR ADDITIONAL DETAILS PRIOR TO INSTALLATION AND SITE PREPARATION WORK.
3. ALL DIMENSIONS ARE IN MILLIMETERS.
4. SOME STRUCTURAL DETAILS HAVE BEEN OMITTED FOR THE PURPOSE OF CLARITY.
- △ 5. CIRCUIT BREAKER (MOTORIZED), ABB, 400A 600V 4POLE T5, WITH 24V DC SHUNT TRIP AND AUX. CONTACT. MOTORIZED BREAKER TRIP UNIT ACTIVATED THROUGH EP0/UPS 24V DC SIGNAL.

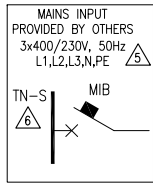
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Schneider Electric

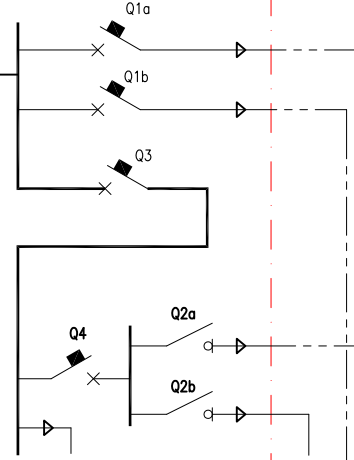
TITLE: SYMMETRA PX
Input: 400/230V AC 3PH SINGLE MAINS
Output: 400/230V AC 3PH 500kW
TOP ENTRY 2 MOD W/ LINE-UP MODULAR BATTERY
BATTERY FRAME INTERNAL VIEW
PROJECT: DRAWINGS SHEET 10 OF 14

DWG NO: SY250K500TH1C2-LB
DRAWN: MAHARUDRAYYA 12-APR-12
ENGINEER: M.LEPARD/A.WARNER 12-APR-12
APPROVED: C.LARSEN/S.WAGH 12-APR-12

REV: 0
FIRST ANGLE PROJECTION

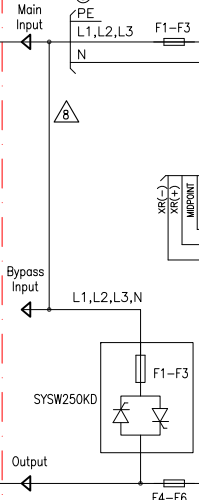


MAINTENANCE BYPASS PANEL

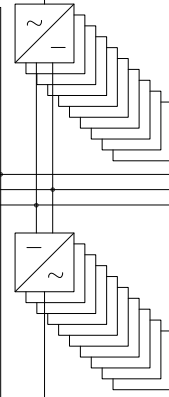


UPS SYSTEM OUTPUT
500kVA-FOR 2 MODULE N
400V 3PH L1,L2,L3,N,PE

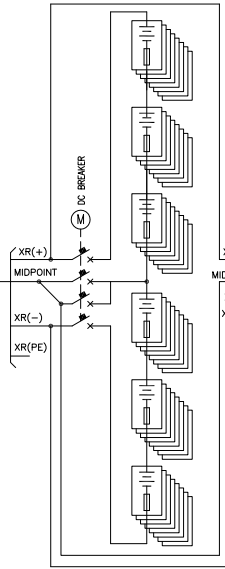
UPS I/O FRAME-A (SYIOF500KD+SYSW250KD)



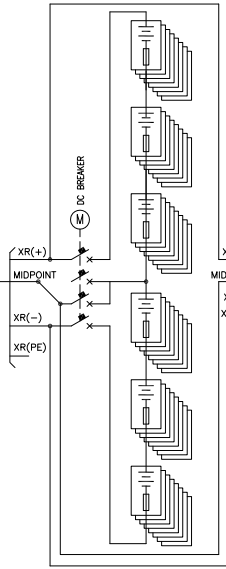
UPS POWER FRAME-A (SYPF250KD+(10)SYPF25KD)



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



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



TO NEXT
XR BATTERY CABINET

LEGEND:

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

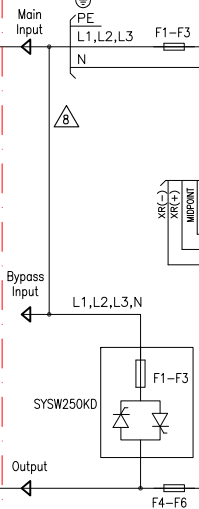
DEVICE RATING (MAINTENANCE BYPASS PANEL)						
DEVICE	CURRENT RATING	RATED OPERATIONAL VOLTAGE	TYPE	MAKE	MODEL	ACCESSORIES
Q1a, Q1b	630A	690V	3P+N MCCB	Schneider Electric	NSX630 Micrologic 2.3	1-NO Aux. Contact
Q2a, Q2b	400A	690V	4P SWITCH DISCONNECT	Schneider Electric	INS400	1-NO Aux. Contact
Q3 FOR 2 MODULE N	800A	690V	4P MCCB	Schneider Electric	NS800N Micrologic 2.0	2-NC Aux. Contact
Q4 FOR 2 MODULE N	800A	690V	4P MCCB	Schneider Electric	NS800N Micrologic 2.0	2-NO Aux. Contact
INVERTER FUSES F1-F3/F4-F6	1250A	700V	HIGH SPEED FUSE	BUSSMANN	170M6466	---
SSW FUSES F1-F3	630A	700V	HIGH SPEED FUSE	BUSSMANN	170M5162	---

DEVICE RATING (XR BATTERY CABINET)						
DC BREAKER	400A	600V DC	4P MCCB	ABB	T5N	1 AUX. CONTACT, 24V DC, SHUNT TRIP, ACTUATOR

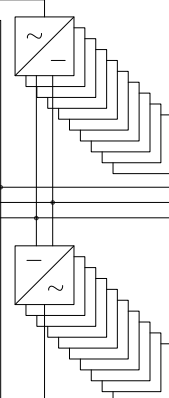
NOTES:

1. INSTALLATION SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE AND LOCAL ELECTRICAL REGULATIONS.
2. REFER TO PRODUCT DOCUMENTATION FOR ADDITIONAL DETAILS PRIOR TO INSTALLATION AND SITE PREPARATION WORK.
3. DRAWING DEPICTS POWER SYSTEM CONNECTIONS AND IS NOT REPRESENTATIVE OF PHYSICAL LAYOUT, PLEASE REFER TO MECHANICAL DRAWINGS FOR PHYSICAL LAYOUT.
- △ 4. MAXIMUM RATED SHORT CIRCUIT CURRENT (I_{cw}) IS 50kA.
- △ 5. 3x400/230V TN-S (PROVIDED BY OTHERS). FOR OTHER EARTHING PRINCIPLES, PLEASE CONTACT BY Schneider Electric. RECOMMENDED UPSTREAM PROTECTION IS A MINIMUM RATING TO SUPPORT MAXIMUM CURRENT, WITHOUT SELECTIVITY. SEE SHEET-13 FOR SITE PLANNING DATA.
- △ 6. FOR TN-SYSTEMS, PLEASE PROVIDE A SUITABLE FUNCTIONAL EARTH ELECTRODE ACCORDING TO IEC/EN60364-5-55, 551.4.2 TO MAINTAIN THE UPS INVERTER REFERENCE. MUST BE CONNECTED TO THE FUNCTIONAL EARTH ELECTRODE TERMINAL-E.
7. ALL AC POWER CABLING IS L1, L2, L3, N, PE.
- △ 8. SINGLE MAINS IS FACTORY DEFAULT CONFIGURATION. BUS BAR LINKS MUST BE REMOVED FOR DUAL MAINS INSTALLATION
9. CABLE LUGS ARE NOT PROVIDED.
- △ 10. THIS DRAWING SHOWS MINIMUM NUMBER OF XR BATTERY FRAMES PER UPS.
MAXIMUM (8) XR BATTERY FRAMES CAN BE BAYED TO EACH UPS.
BAYING KIT IS SUPPLIED WITH THIS SOLUTION. XR BATTERY FRAME HAS MOTORIZED BREAKER.
11. CABLE LENGTHS FOR STATIC BYPASS INPUT AND OUTPUT MUST BE SAME SUM TOTAL TO ENSURE CORRECT LOAD SHARING IN STATIC BYPASS OPERATION.
- △ 12. THIRD PARTY PRODUCT PROVIDED BY Schneider Electric. NOT PART OF THIS SOLUTION.

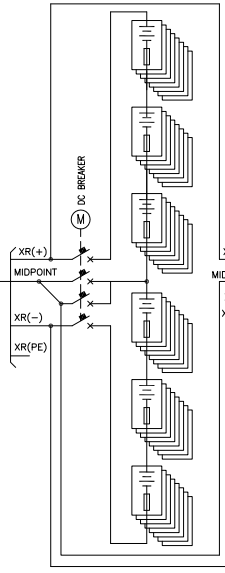
UPS I/O FRAME-B (SYIOF500KD+SYSW250KD)



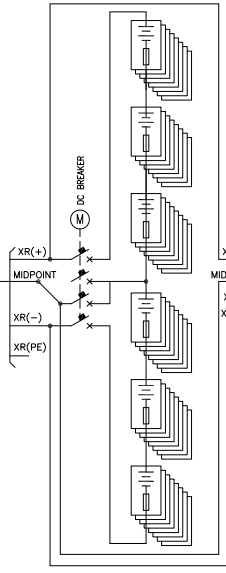
UPS POWER FRAME-B (SYPF250KD+(10)SYPF25KD)



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



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



TO NEXT
XR BATTERY CABINET

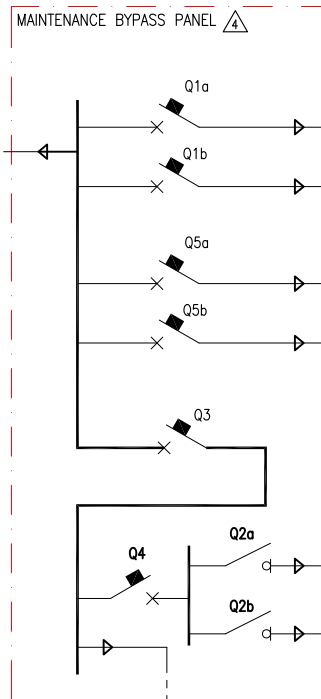
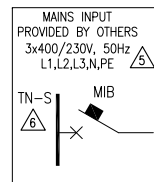
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Schneider Electric

TITLE: SYMMETRA PX
Input: 400/230V AC 3PH SINGLE MAINS
Output: 400/230V AC 3PH 500kW
TOP ENTRY 2 MOD W/ LINE-UP MODULAR BATTERY SYSTEM ONE LINE DIAGRAM-SINGLE INPUT
PROJECT: DRAWINGS **SHEET 11 OF 14**

DWG NO: SY250K500TH1C2-LB
DRAWN: JAYAPRAKASH
ENGINEER: S.ANDERSEN
APPROVED: SANDERSEN

REV. 2
DATE: 18-FEB-16
ANGLE PROJECTION: N/A



UPS I/O FRAME-A
(SYIOF500KD+SYSW250KD)

UPS POWER FRAME-A
(SYPF250KD+(10)SYPF25KD)

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

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

UPS I/O FRAME-B
(SYIOF500KD+SYSW250KD)

UPS POWER FRAME-B
(SYPF250KD+(10)SYPF25KD)

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

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

LEGEND:
— — — — — AC CABLE — PROVIDED BY OTHERS

DEVICE RATING (MAINTENANCE BYPASS PANEL)					
DEVICE	CURRENT RATING	RATED OPERATIONAL VOLTAGE	TYPE	MAKE	MODEL
Q1a, Q1b	630A	690V	3P+N MCB	Schneider Electric	NSX630 Micrologic 2.3
Q2a, Q2b	400A	690V	4P SWITCH DISCONNECT	Schneider Electric	INS400
Q3 FOR 2 MODULE N	800A	690V	4P MCB	Schneider Electric	NS800N Micrologic 2.0
Q4 FOR 2 MODULE N	800A	690V	4P MCB	Schneider Electric	NS800N Micrologic 2.0
Q5a, Q5b	400A	690V	3P+N MCB	Schneider Electric	NSX400 Micrologic 2.3
INVERTER FUSES F1-F3/F4-F6	1250A	700V	HIGH SPEED FUSE	BUSSMANN	170M6466
SSW FUSES F1-F3	630A	700V	HIGH SPEED FUSE	BUSSMANN	170M5162

DEVICE RATING (XR BATTERY CABINET)					
DC BREAKER	400A	600V DC	4P MCB	ABB	TSN
					1 AUX. CONTACT, 24V DC, SHUNT TRIP, ACTUATOR

NOTES:

1. INSTALLATION SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE AND LOCAL ELECTRICAL REGULATIONS.
2. REFER TO PRODUCT DOCUMENTATION FOR ADDITIONAL DETAILS PRIOR TO INSTALLATION AND SITE PREPARATION WORK.
3. DRAWING DEPICTS POWER SYSTEM CONNECTIONS AND IS NOT REPRESENTATIVE OF PHYSICAL LAYOUT, PLEASE REFER TO MECHANICAL DRAWINGS FOR PHYSICAL LAYOUT.
- △ 4. MAXIMUM RATED SHORT CIRCUIT CURRENT (I_{cw}) IS 50kA.
- △ 5. 3x400/230V TN-S (PROVIDED BY OTHERS). FOR OTHER EARTHING PRINCIPLES, PLEASE CONTACT BY Schneider Electric. RECOMMENDED UPSTREAM PROTECTION IS A MINIMUM RATING TO SUPPORT MAXIMUM CURRENT, WITHOUT SELECTIVITY. SEE SHEET-13 FOR SITE PLANNING DATA.
- △ 6. FOR TN-SYSTEMS, PLEASE PROVIDE A SUITABLE FUNCTIONAL EARTH ELECTRODE ACCORDING TO IEC/EN60364-5-55, 551.4.2 TO MAINTAIN THE UPS INVERTER REFERENCE. MUST BE CONNECTED TO THE FUNCTIONAL EARTH ELECTRODE TERMINAL-E.
7. ALL AC POWER CABLING IS L1, L2, L3, N, PE.
- △ 8. SINGLE MAINS IS FACTORY DEFAULT CONFIGURATION. BUS BAR LINKS MUST BE REMOVED FOR DUAL MAINS INSTALLATION
9. CABLE LUGS ARE NOT PROVIDED.
- △ 10. THIS DRAWING SHOWS MINIMUM NUMBER OF XR BATTERY FRAMES PER UPS.
MAXIMUM (8) XR BATTERY FRAMES CAN BE BAYED TO EACH UPS.
BAYING KIT IS SUPPLIED WITH THIS SOLUTION. XR BATTERY FRAME HAS MOTORIZED BREAKER.
11. CABLE LENGTHS FOR STATIC BYPASS INPUT AND OUTPUT MUST BE SAME SUM TOTAL TO ENSURE CORRECT LOAD SHARING IN STATIC BYPASS OPERATION.
- △ 12. THIRD PARTY PRODUCT PROVIDED BY Schneider Electric. NOT PART OF THIS SOLUTION.

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Schneider Electric

TITLE: SYMMETRA PX
Input: 400/230V AC 3PH SINGLE MAINS
Output: 400/230V AC 3PH 500kW
TOP ENTRY 2 MOD W/ LINE-UP MODULAR BATTERY
SYSTEM ONE LINE DIAGRAM-DUAL INPUT
PROJECT: DRAWINGS SHEET 12 OF 14

DWG NO: SY250K500TH1C2-LB
DRAWN: JAYAPRAKASH
ENGINEER: S.ANDERSEN
APPROVED: S.ANDERSEN

REV: 2
18-FEB-16
18-FEB-16
18-FEB-16
ANGLE PROJECTION
N/A

Symmetra™ PX 250K UPS 2 Module Site Planning Data - without MBwD

Individual UPS Details

UPS Frame Rating	UPS rating kVA / kW			AC Mains Input (400V) (Single/Dual Mains)							AC Bypass Input (400V) (Dual Mains)					Battery System			AC Output (400V)		Mechanical Data (UPS+I/O Frame only) ¹⁰			
	QTY power module 25kW	[P] kW nom	pf	[P] kW nom	[P] kW max.	Utility source		Current I [A]		Q1 ⁴ Protection Breaker [A]	Utility source		Current I [A]		Q5 ⁴ Protection Breaker [A]	Vn nominal [V DC]	Full load [kW]	Imax DC Discharge [A]	In [A]	Q2 ⁴ Protection Breaker [A]	Typical Dimensions (HxWxD) [mm]	Average Weight [kg]	Floor Loading [kg/m ²]	Heat Rejection Battery Fully Charged [watt]
						Hz	[V]	Nominal	Max.		Hz	[V]	Nominal	Max.										
250kVA / 250kW 1 x 250k frame	4	100	1	104	115	50	400	151	166	160	50	400	144	159	160	2 x 288	104	226	144	160				
	5	125	1	130	143	50	400	189	208	250	50	400	180	198	250	2 x 288	130	283	180	225				
	6	150	1	156	172	50	400	227	249	250	50	400	217	238	250	2 x 288	156	339	217	225				
	7	175	1	182	201	50	400	264	291	400	50	400	253	278	400	2 x 288	182	396	253	400				
	8	200	1	208	229	50	400	302	332	400	50	400	289	318	400	2 x 288	208	452	289	400				
	9	225	1	234	258	50	400	340	374	400	50	400	325	357	400	2 x 288	234	509	325	400				
	10	250	1	260	286	50	400	378	416	630 400 ⁶	50	400	361	397	400 ⁶	2 x 288	260	565	361	400				

System Details

UPS Frame Rating	UPS rating kVA / kW			System AC Mains Input (400V) (Single/Dual Mains)							System AC Bypass Input (400V) (Dual Mains)					System AC Output (400V)		Q3 ⁴ System Bypass Protection Breaker [A]
	QTY power module 25kW	[P] kW nom	pf	[P] kW nom	[P] kW max.	Utility source		Current I [A]		MIB ⁴ Protection Breaker [A]	Utility source		Current I [A]		BIB ⁵ Protection Breaker [A]	In [A]	Q4 ⁴ Protection Breaker [A]	
						Hz	[V]	Nominal	Max.		Hz	[V]	Nominal	Max.				
500kVA/ 500kW	20	500	1	521	573	50	400	756	831	800 ⁶	50	400	722	794	800 ⁶	722	800 ⁶	800 ⁶

Symmetra™ PX

Notes.

- The Symmetra PX 250 is not configured with less than 5 power modules rated at 100kVA N+1 internal redundancy or 125kVA full load N
- For breaker ratings overload has not been considered
- Values given for stand alone unit.
- Q1,Q2,Q3, Q4 and Q5 recommended for 3rd party maintenance bypass
- Used for 3rd party bypass with dual mains
- Breaker must comply with IEC 60947-2 which guarantee a non-tripping current of 1,05 times current setting for 2 hours.
Alternative breaker size must be higher than stated current
- For maximum scalability option or future expansion, it is recommended that the UPS frames be installed at their full ratings - see highlighted data.
- All wirings to be in accordance with all applicable national and/or local electrical regulations.
- Control wiring and power wiring must be run in separate conduit.
- Weights and dimensions shown do not include battery cabinet(s) or other options.
- Input: THDI < 5% at full load.
- Output: THDU < 2% Linear Load, < 3% Non Linear Load.
- Ratings of the over current devices supplied for information only. User to consult with their engineering services before adopting.
- Requirements for back-to-back Symmetra PX 250/500 UPS installations:
 - To ensure proper airflow, you must install a Plexiglass French Door Kit (0H-0242) at the rear of each Power frame and I/O frame in one of the two systems.
 - To prevent batteries from being overheated by hot air from the power frames, battery frames must be installed back to back, and power frames must be installed back to back.

Efficiency Details

UPS Rating	25% load	50% load	75% load	100% load
250kVA/250kW	95.5%	96.1%	96.0%	95.7%

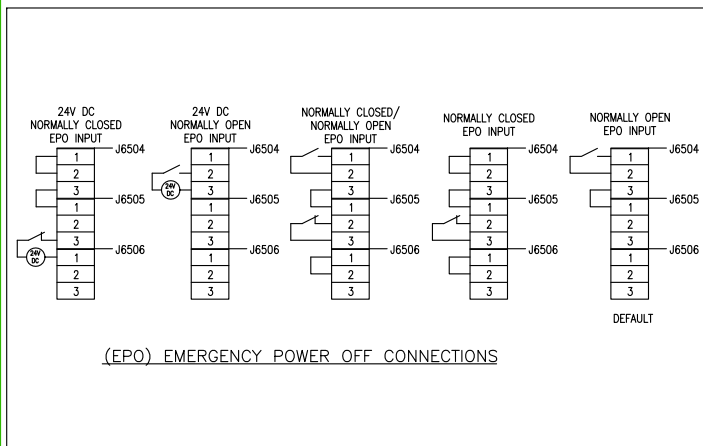
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Schneider
Electric

TITLE: SYMMETRA PX
Input: 400/230V AC 3PH SINGLE MAINS
Output: 400/230V AC 3PH 500kW
TOP ENTRY 2 MOD W/ LINE-UP MODULAR BATTERY
SITE PLANNING DATA
PROJECT: DRAWINGS SHEET 13 OF 14

DWG NO: SY250K500TH1C2-LB
DRAWN: BALAMURUGAN
ENGINEER: M.LEPARD/A.WARNER
APPROVED: S.ANDERSEN/S.WAGH

REV: 1
ANGLE
PROJECTION
N/A



(EPO) EMERGENCY POWER OFF CONNECTIONS

NOTES:

1. INSTALLATION MUST COMPLY WITH ALL APPLICABLE NATIONAL, STATE AND LOCAL CODES.
2. REFER TO PRODUCT DOCUMENTATION FOR ADDITIONAL DETAILS PRIOR TO INSTALLATION AND SITE PREPARATION WORK.

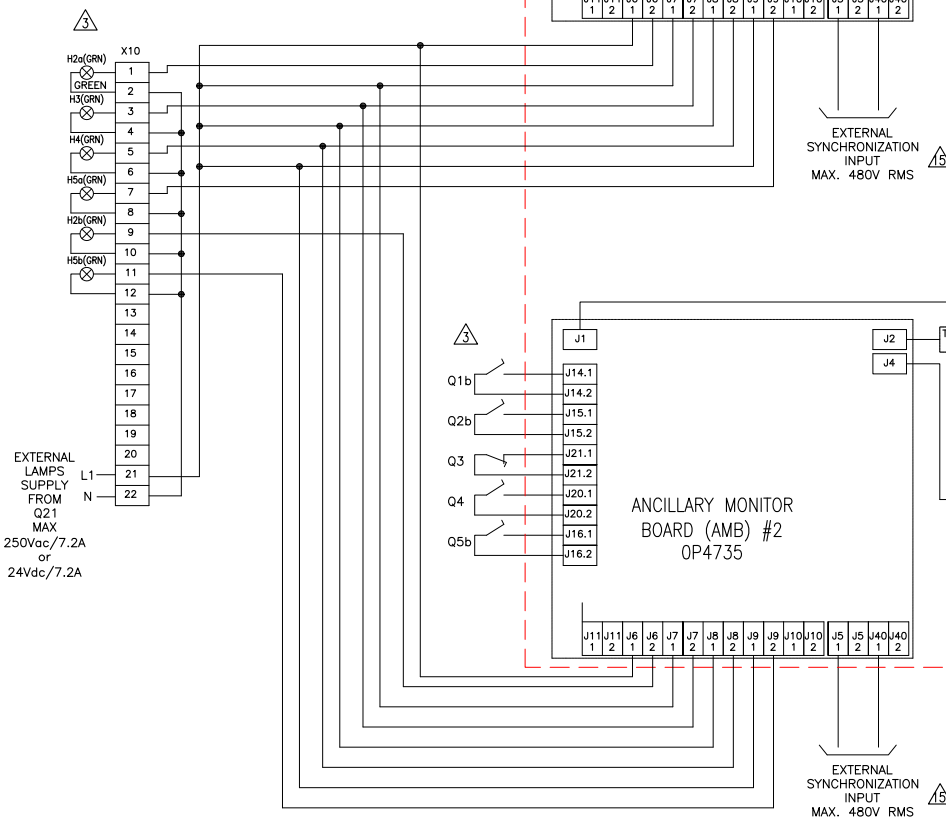
△ 3. LIGHTS AND CONTACTS ARE FIELD WIRED.

△ 4. STANDARD CABLE LENGTH IS 50 METERS AND IS PART OF SKU SYOPT007.

5. ON EACH SYOPT007, INSTALL TERMINATOR OW03913 IN THE J2 TERMINAL ON THE AMB.
6. ON EACH SYOPT007, CONNECT THE "ABUS" CABLE(OW3785C) FROM J4 ON THE AMB(OP4735) TO THE "ABUS" TERMINAL EXTERNAL CONNECTION BOARD OF ID AND RELAY CONTROLLER ON THE FRONT OF THE INPUT/OUTPUT ENCLOSURE.
7. IN EACH UPS, CONNECT THE ECT CABLE(OW3759A) FROM J6500 ON THE ECT BOARD(OP4711) IN MBP TO J6501 ON THE ECT BOARD(OP4711) IN THE TOP OF THE INPUT/OUTPUT ENCLOSURE.
8. IN EACH UPS, CONNECT NORMALLY OPEN(NO) AUXILIARY SWITCH FOR Q1, Q2 AND Q5 STATUS.
9. IN EACH UPS, CONNECT H2 AND H5 LAMPS FOR PERMISSION TO OPERATE Q2 AND Q5.
10. INSTALL 1A FUSE ON EACH PHASE ON THE EXTERNAL SYNC CABLE AT THE SYNC. SOURCE.

- △ 11. IN EACH UPS, CONNECT CABLE FOR Q2 TRIPPING TO EITHER:
A. J6503(UVR). WHEN USING SQUARE D UVR OR ABB S8 UVR, AN EXTERNAL 24V DC SELV SUPPLY SHOULD BE CONNECTED TO J6507. FOR THE UVR, THE FOLLOWING PARTS ARE NEEDED TO CONNECT J6503 PIN 2 AND 3: 1 TYCO 1-480700-0, M&L 3-POSITINO PLUG HOUSING AND 2 TYCO 3650218-3 M&L PIN, AWG 20-14 (NOT SUPPLIED).
B. J6508 (SOR). FOR THE SOR SHUNT TRIP, THE FOLLOWING PARTS ARE NEEDED TO CONNECT TO J6508: 1 TYCO 1-480698-0, M&L 2-POSITINO PLUG HOUSING AND 2 TYCO 350218-3 M&L PIN, AWG 20-147 (NOT SUPPLIED).
12. CONNECT NC CONTACT FOR Q3. EACH UPS MUST BE CONNECTED TO A SEPARATE DRY CONTACT.
13. CONNECT NO CONTACT FOR Q4. EACH UPS MUST BE CONNECTED TO A SEPARATE DRY CONTACT.
14. CONNECT H3 AND H4 LAMPS IN PARALLEL.
- △ 15. OPTION: CONNECT EXTERNAL SYNCHRONIZATION CABLES FROM L1 AND L2 OF THE PREFERRED AC SOURCE TO J5(L1) AND J40(L2) ON THE OP4735 BOARD FOR EACH UPS IN PARALLEL SYSTEM.
- △ 16. FOR EPO CONNECTION DEFAULT SETTING AND OPTIONS REFER TO DETAIL-A.

REMOTE SWITCH GEAR
MONITOR BOARD
(TO BE MOUNTED IN CUSTOMER
SWITCH GEAR PANEL)



SYOPT007

ANCILLARY MONITOR
BOARD (AMB) #1
OP4735

ANCILLARY MONITOR
BOARD (AMB) #2
OP4735

EPO CONNECTION
AND
TRIP BOARD
(ECT) #1
OP4711

EPO CONNECTION
AND
TRIP BOARD
(ECT) #2
OP4711

SYMMETRA PX
INPUT-OUTPUT
FRAME-A
J6501 OP4711
ECT BOARD
(EPO
CONNECTION)
J6503 OP4709
ID AND RELAY
CONTROLLER

SYMMETRA PX
INPUT-OUTPUT
FRAME-B
J6501 OP4711
ECT BOARD
(EPO
CONNECTION)
J6503 OP4709
ID AND RELAY
CONTROLLER

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Schneider
Electric

TITLE: SYMMETRA PX
Input: 400/230V AC 3PH SINGLE MAINS
Output: 400/230V AC 3PH 500kW
TOP ENTRY 2 MOD W/ LINE-UP MODULAR BATTERY
SYSTEM WIRING DIAGRAM

PROJECT: DRAWINGS SHEET 14 OF 14

DWG NO: SY250K500TH1C2-LB

DRAWN: JAYAPRAKASH 18-FEB-16
ENGINEER: S.ANDERSEN 18-FEB-16
APPROVED: SANDERSEN 18-FEB-16

REV. 1
ANGLE
PROJECTION
N/A