
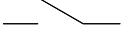

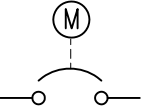
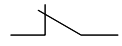
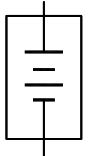
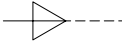
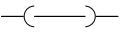


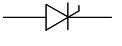




# Symmetra PX 250kW 3/4 wire Single/Dual Mains Top Entry 1 MOD with Line-up Modular Battery

Sheet No.	Component /Detail	Description
1	Drawing Guide	Symmetra PX 500kW 3/4 Wire Single/Dual Mains Top Entry 1 MOD with Line-up Modular Battery Drawing Guide
2	Solution Isometric	Symmetra PX 500kW 3/4 Wire Single/Dual Mains Top Entry 1 MOD with Line-up Modular Battery Solution Isometric
3	Run time Details	Symmetra PX 500kW 3/4 Wire Single/Dual Mains Top Entry 1 MOD with Line-up Modular Battery Runtime Details
4-5	Solution General Arrangements	Symmetra PX 500kW 3/4 Wire Single/Dual Mains Top Entry 1 MOD with Line-up Modular Battery Solution General Arrangements
6	Solution Anchoring Details	Symmetra PX 500kW 3/4 Wire Single/Dual Mains Top Entry 1 MOD with Line-up Modular Battery Solution Anchoring
7	UPS Frame Internal view s	Symmetra PX 500 kW UPS Internal Details
8-10	Input-Output Frame Internal view s	Symmetra PX 500 kW UPS Input Output Frame internal Details
11	Battery Frame Internal view s	Symmetra PX Battery Frame Internal view s
12-13	System One Line Diagram	Symmetra PX 500 kW 3/4 Wire Single/Dual Mains Top Entry 1 MOD with Line-up Modular Battery System One Line Diagram
14	Site Planning Data	Symmetra PX 500 kW 3/4 Wire Single/Dual Mains Top Entry 1 MOD with Line-up Modular Battery Site Planning Data
15	System Wiring Diagram	Symmetra PX 500 kW 3/4 Wire Single/Dual Mains Top Entry 1 MOD with 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
	TERMINATION POINT		BUS BAR LINK		INVERTER
	FUSE		STATIC SWITCH		
	TERMINAL		LAMP		

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**Schneider**  
Electric

TITLE: SYMMETRA PX  
Input: 480V AC 3PH SINGLE/DUAL MAINS  
Output: 480V AC 3PH, 250kW  
TOP ENTRY 1MOD WITH LINE-UP MODULAR BATTERY  
DRAWING GUIDE

PROJECT: DRAWINGS SHEET 1 OF 15

DWG NO: SY250K250TGC1-LB

DRAWN BY: BALAMURUGAN 29-OCT-13

ENGINEER: DAVID L. 29-OCT-13

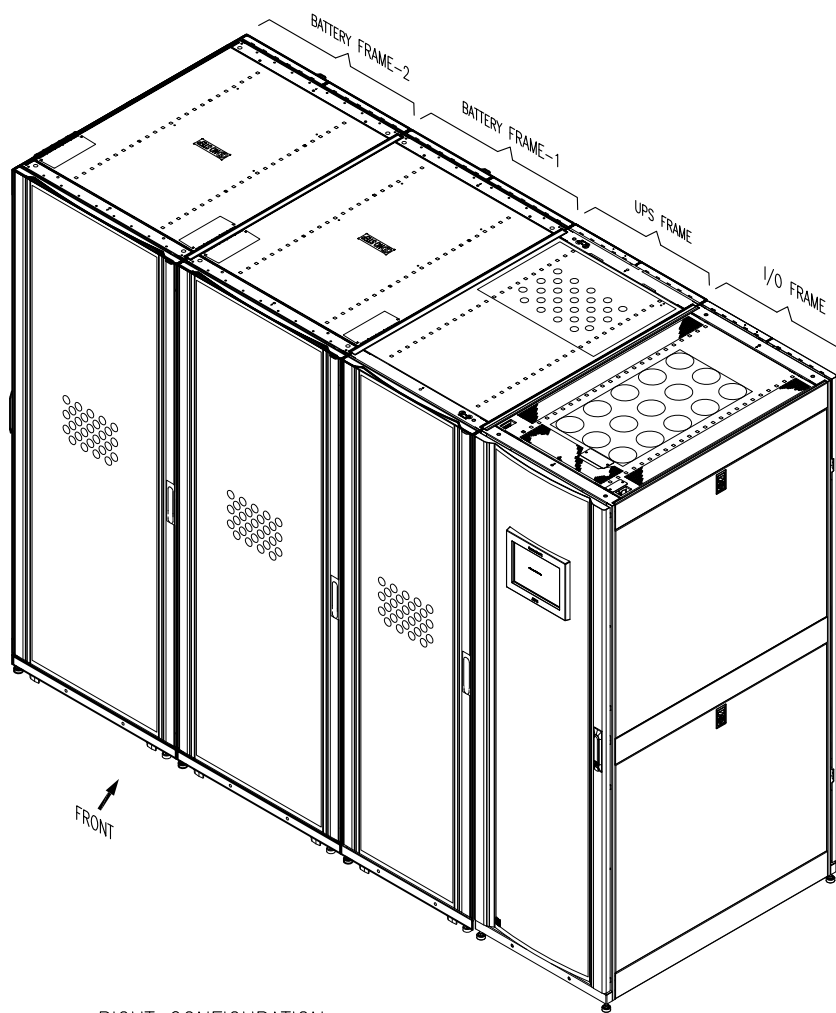
APPROVED BY: PAUL B. 29-OCT-13

REV: 0

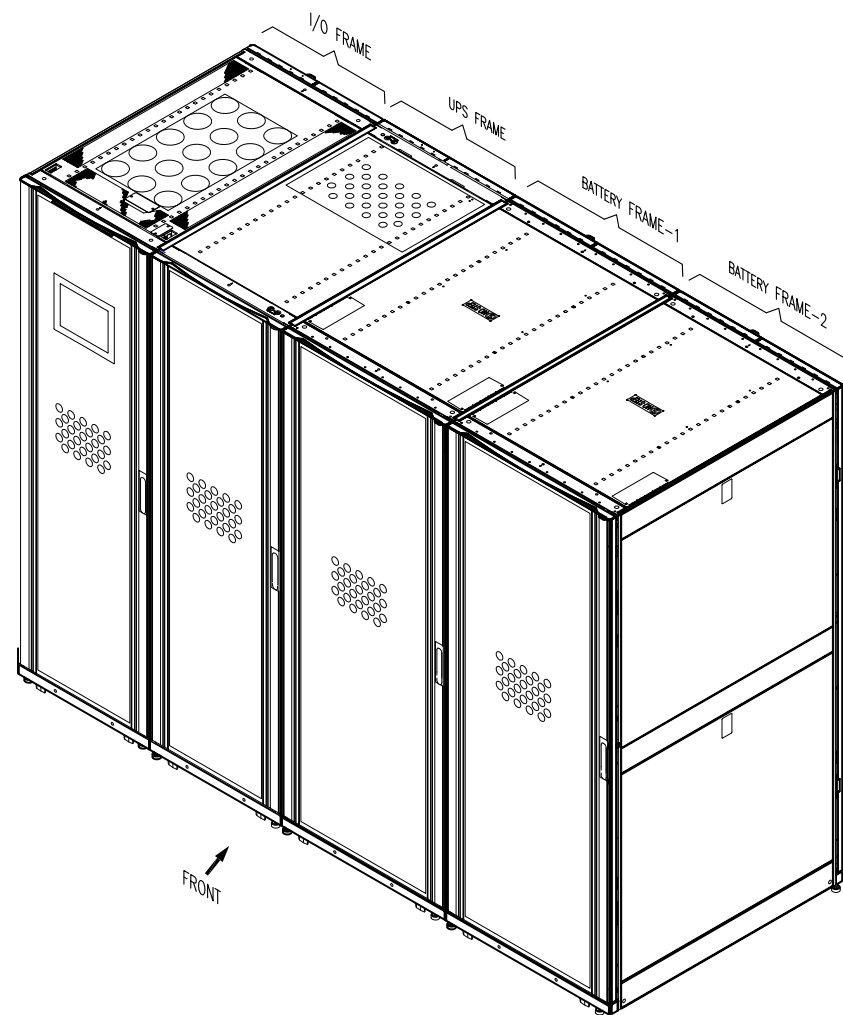
ANGLE

PROJECTION

N/A



RIGHT CONFIGURATION



LEFT CONFIGURATION

ISOMETRIC VIEW

NOTES:

1. INSTALLATION SHALL 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. CABLE ENTRY IS FROM TOP OF THE UNIT.

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**Schneider**  
Electric

TITLE: SYMMETRA PX  
Input: 480V AC 3PH SINGLE/DUAL MAINS  
Output: 480V AC 3PH, 250kW  
TOP ENTRY 1MOD WITH LINE-UP MODULAR BATTERY  
SOLUTION ISOMETRIC VIEWS

PROJECT: DRAWINGS SHEET 2 OF 15

DWG NO: SY250K250TGC1-LB

DRAWN BY: BALAMURUGAN 25-FEB-15

ENGINEER: DAVID L. 25-FEB-15


APPROVED BY: PAUL B. 25-FEB-15

REV. 1

THIRD

ANGLE

PROJECTION

100 - 250kW TOP FEED SINGLE/DUAL MAINS 1 MODULE WITH LINE-UP BATTERIES (6min to 105min) 																																			
SKU Number	No. of In-Out Frame	No. of Power Frames	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	
				No. of Battery Frames	No. of Battery Modules	No. of Battery Frames	No. of Battery Modules	No. of Battery Frames	No. of Battery Modules	No. of Battery Frames	No. of Battery Modules	No. of Battery Frames	No. of Battery Modules	No. of Battery Frames	No. of Battery Modules	No. of Battery Frames	No. of Battery Modules	No. of Battery Frames	No. of Battery Modules	No. of Battery Frames	No. of Battery Modules	No. of Battery Frames	No. of Battery Modules	No. of Battery Frames	No. of Battery Modules	No. of Battery Frames	No. of Battery Modules	No. of Battery Frames	No. of Battery Modules	No. of Battery Frames	No. of Battery Modules	No. of Battery Frames	No. of Battery Modules		
SY100K250D	1	1	4	1	7	1	8	2	9	2	10	2	12	2	14	3	17	3	19	3	24	4	29	4	33	5	37	6	41	6	45	6	49	7	51
SY125K250D	1	1	5	1	8	2	10	2	11	2	13	2	15	3	18	3	21	3	24	4	30	5	36	5	41	6	46	7	52	7	57	8	62	8	64
SY150K250D	1	1	6	2	10	2	12	2	13	2	15	3	18	3	21	4	25	4	29	5	36	6	43	6	49	7	56	8	62	N/A	N/A	N/A	N/A	N/A	N/A
SY200K250D	1	1	8	2	13	2	16	3	18	3	20	3	23	4	28	5	33	5	38	6	48	7	57	8	65	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

NOTES:

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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. BATTERY RUN TIMES ARE THEORETICAL AND CALCULATED BASED ON DATA PROVIDED BY BATTERY MANUFACTURER ASSUMING OPTIMUM ENVIRONMENT AND LOAD CONDITIONS.

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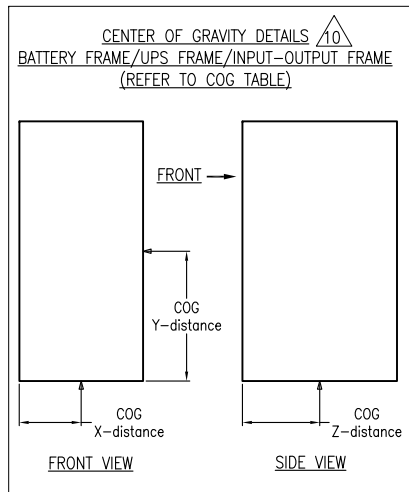
TITLE: SYMMETRA PX  
Input: 480V AC 3PH SINGLE/DUAL MAINS  
Output: 480V AC 3PH, 250kW  
TOP ENTRY 1MOD WITH LINE-UP MODULAR BATTERY  
SOLUTION RUNTIME DETAILS  
PROJECT: DRAWINGS SHEET 3 OF 15

DWG NO: SY250K250TGC1-LB  
DRAWN BY: BALAMURUGAN  
ENGINEER: DAVID L  
APPROVED BY: PAUL B

REV. 0  
29-OCT-13  
29-OCT-13  
29-OCT-13  
ANGLE  
PROJECTION  
N/A

Floor Loading Data (Fully Populated unit)				
Description	SKU Reference	Dimensions H x W x D Inch[mm]	Weight in LBS [Kg]	Floor Loading lbs/ sq. ft[kg / sq. m]
BATTERY FRAME	SYBFXR8-8	78.39x29.53x42.13 [1991x750x1070]	3510 [1595]	406 [1988]
UPS FRAME	SYPF250KD with 10 Power Modules	78.39x23.62x42.13 [1991x600x1070]	1484 [675]	215 [1051]
I/O FRAME	SYIOF500KD with 250kW Static Switch	78.39x23.62x42.13 [1991x600x1070]	904 [411]	131 [640]

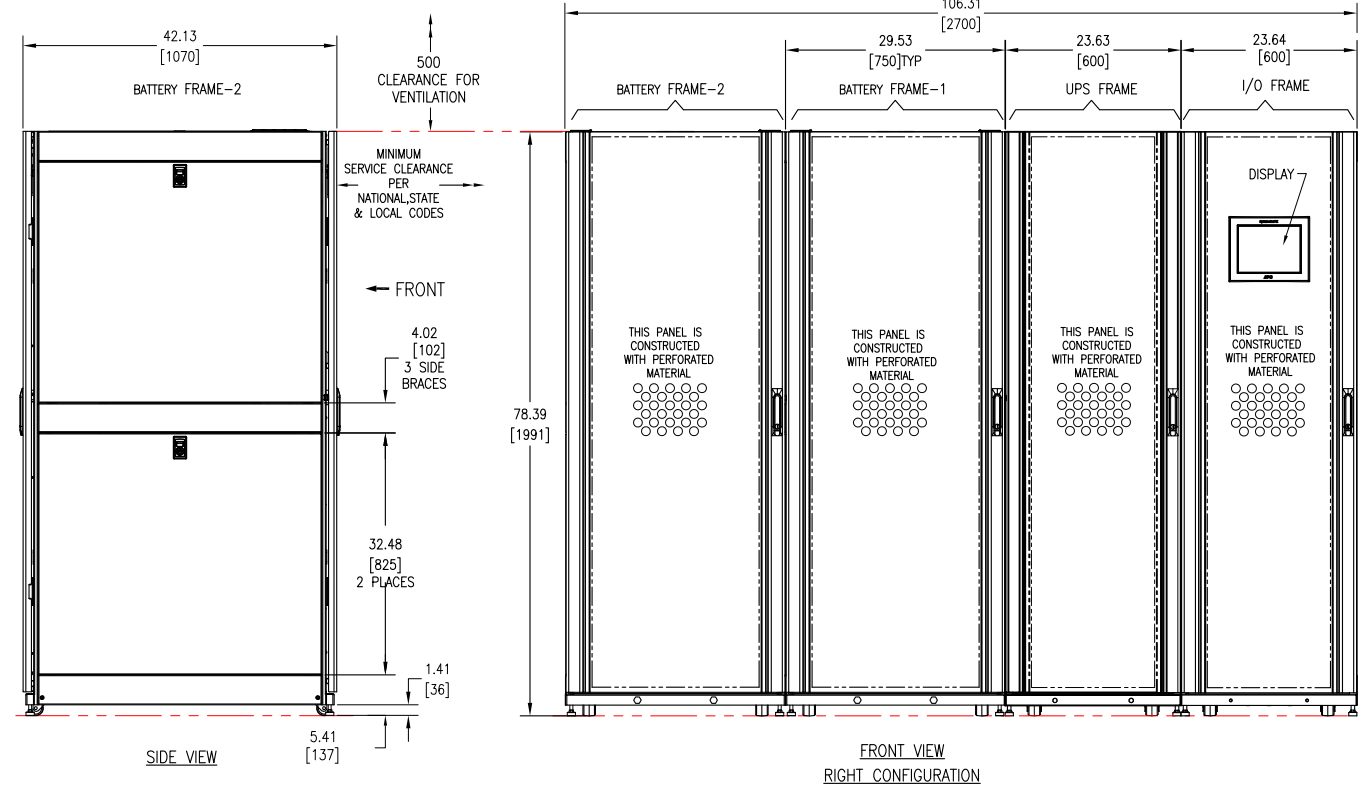
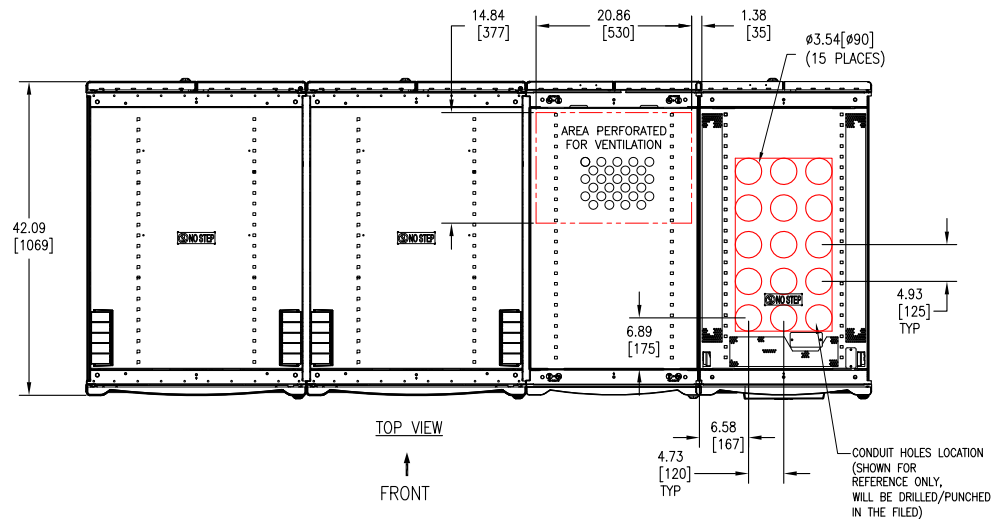
COG TABLE			
CENTER OF GRAVITY	BATTERY FRAME	UPS FRAME	I/O FRAME
X - DISTANCE	14.76 [375]	12.85 [326.4]	12.96 [329.2]
Y - DISTANCE	39.17 [995]	42.14 [1070.3]	21 [533.5]
Z - DISTANCE	22.44 [570]	16.65 [423]	31.04 [788.5]



#### NOTES:

1. INSTALLATION SHALL 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. ALL DIMENSIONS ARE IN INCHES [MILLIMETERS].
4. WEIGHT PER FRAME(UNPOPULATED)

	LBS	KG
UPS FRAME	534.00	242.73
IN/OUT FRAME	730.00	332.00
BATTERY FRAME	373.60	822.00
250kW SSW	174.00	79.00
5. CABLE ENTRY IS FROM TOP OF THE 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 PROVIDED CONSERVATIVE 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.



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**Schneider Electric**

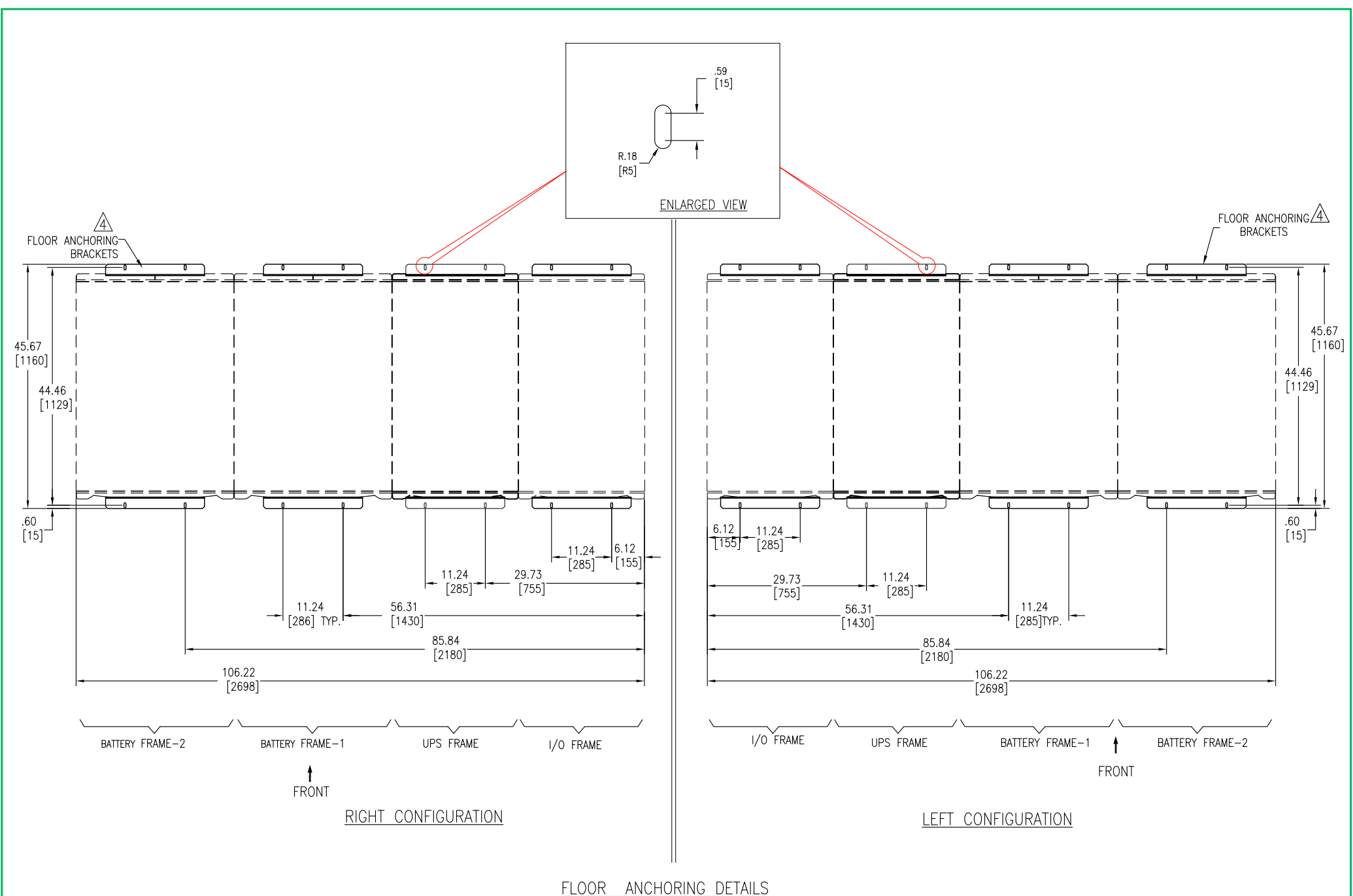
TITLE: SYMMETRA PX  
Input: 480V AC 3PH SINGLE/DUAL MAINS  
Output: 480V AC 3PH, 250kW  
TOP ENTRY 1MOD WITH LINE-UP MODULAR BATTERY  
SOLUTION GENERAL ARRANGEMENT - RIGHT CONFIG  
PROJECT: DRAWINGS SHEET 4 OF 15

DWG NO: SY250K250TGC1-LB  
DRAWN BY: BALAMURUGAN  
ENGINEER: DAVID L  
APPROVED BY: PAUL B

REV. 2  
THIRD  
ANGLE  
PROJECTION

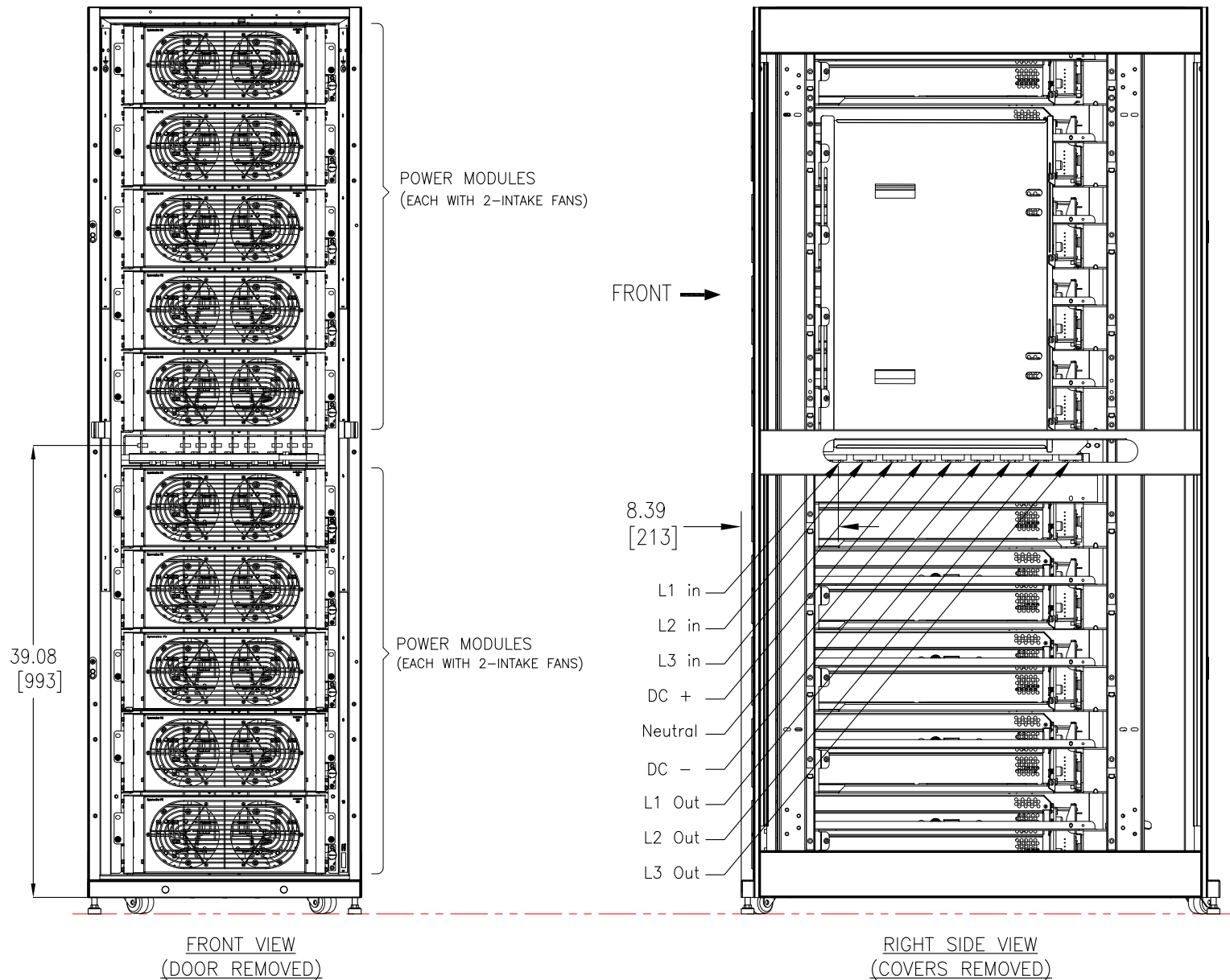






NOTES:  
1. INSTALLATION SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE AND LOCAL CODES.  
2. REFER TO PRODUCT DOCUMENTATION FOR ADDITIONAL DETAILS PRIOR TO INSTALLATION AND SITE PREPARATION WORK.  
3. ALL DIMENSIONS ARE IN INCHES[MILLIMETERS].  
△4. FLOOR ANCHORING BRACKETS CAN BE USED TO ANCHOR ENCLOSURE. USE CODE COMPLIANT FASTENERS TO SECURE THE UNIT.

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PROJECT: DRAWINGS		SHEET 6 OF 15		DRAWN BY: BALAMURUGAN		29-OCT-13		THIRD
				ENGINEER: DAVID L		29-OCT-13		ANGLE
				APPROVED BY: PAUL B		29-OCT-13		PROJECTION



NOTES:

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2. REFER TO PRODUCT DOCUMENTATION FOR ADDITIONAL DETAILS PRIOR TO INSTALLATION AND SITE PREPARATION WORK.
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4. SOME STRUCTURAL DETAILS HAVE BEEN OMITTED FOR CLARITY.

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**Schneider**  
Electric

TITLE: SYMMETRA PX  
Input: 480V AC 3PH SINGLE/DUAL MAINS  
Output: 480V AC 3PH, 250kW  
TOP ENTRY 1MOD WITH LINE-UP MODULAR BATTERY  
UPS POWER FRAME INTERNAL VIEW

PROJECT: DRAWINGS SHEET 7 OF 15

DWG NO: SY250K250TGC1-LB

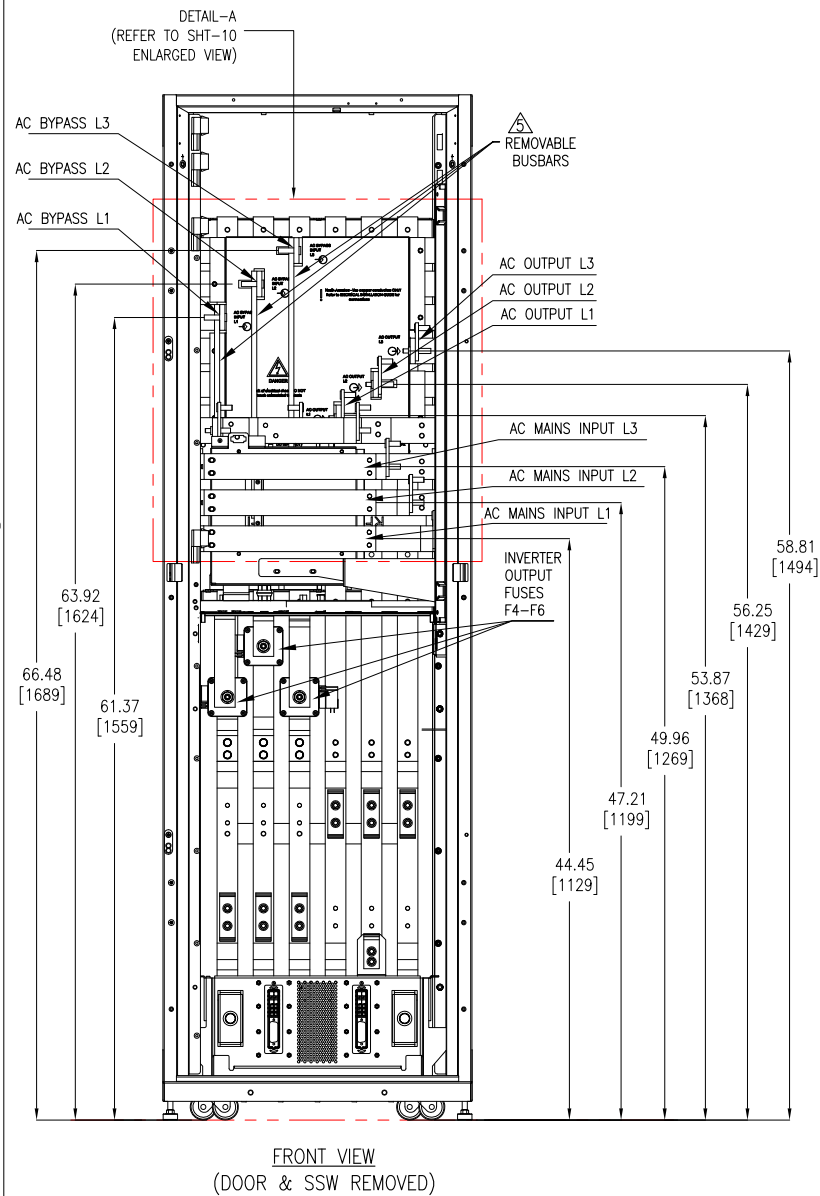
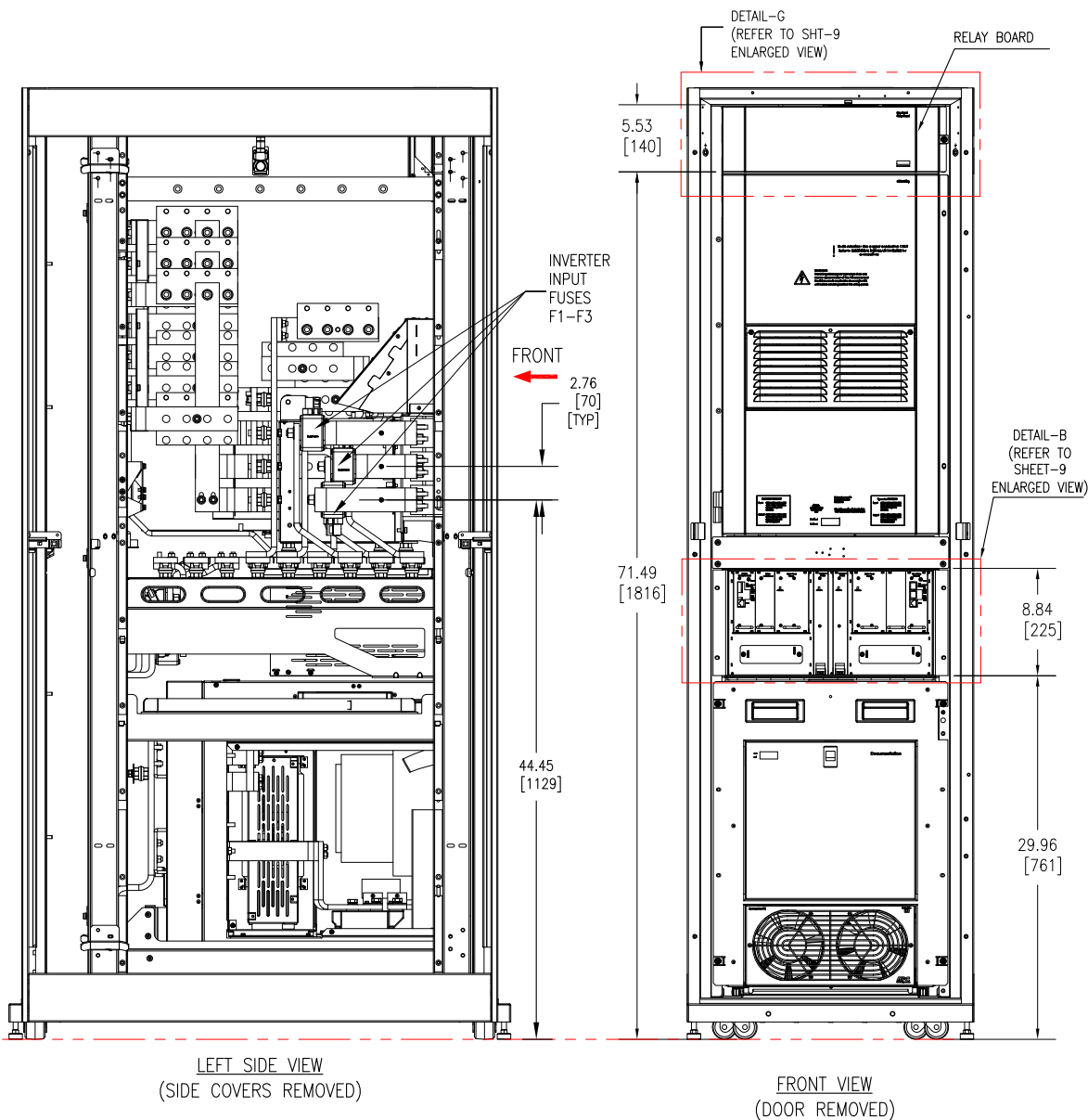
DRAWN BY: BALAMURUGAN  
ENGINEER: DAVID L.

APPROVED BY: PAUL B

REV. 0

29-OCT-13  
29-OCT-13

THIRD  
ANGLE  
PROJECTION



#### NOTES:

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3. ALL DIMENSIONS ARE IN INCHES[MILLIMETERS].
4. SOME STRUCTURAL DETAILS HAVE BEEN OMITTED FOR CLARITY.
- △5. BUS BARS SHALL BE REMOVED FOR DUAL MAINS CONFIGURATION.

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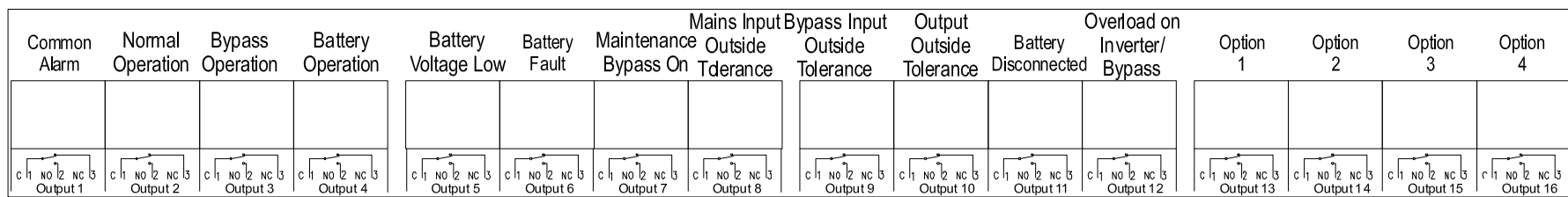
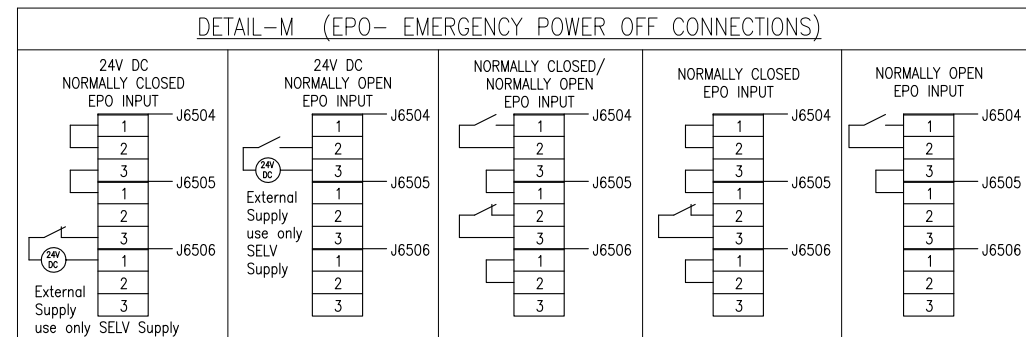
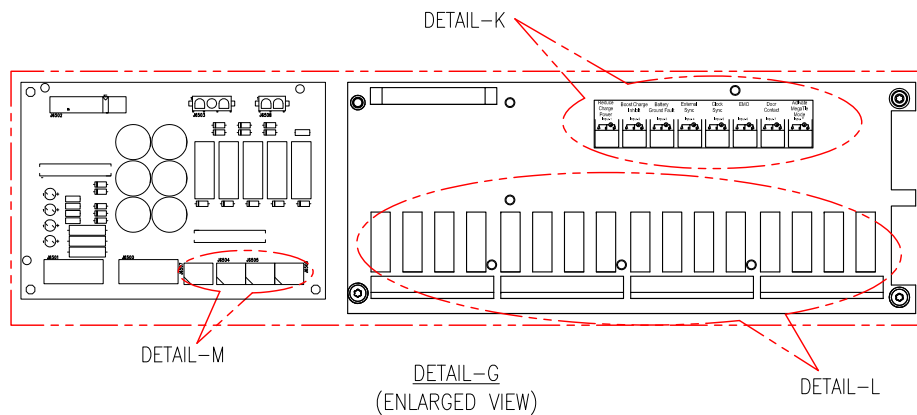
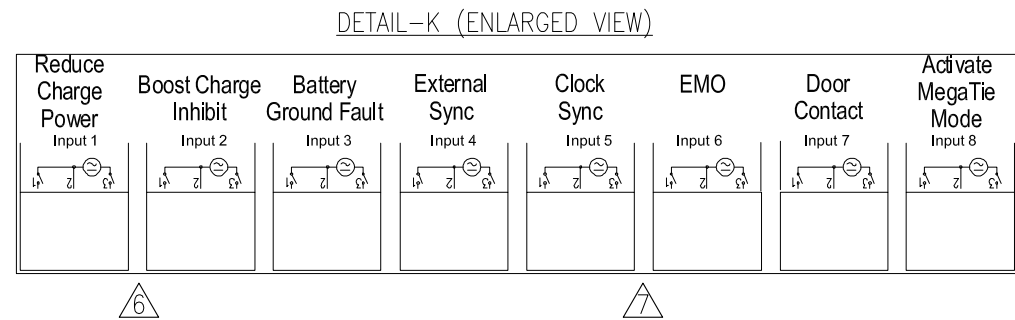
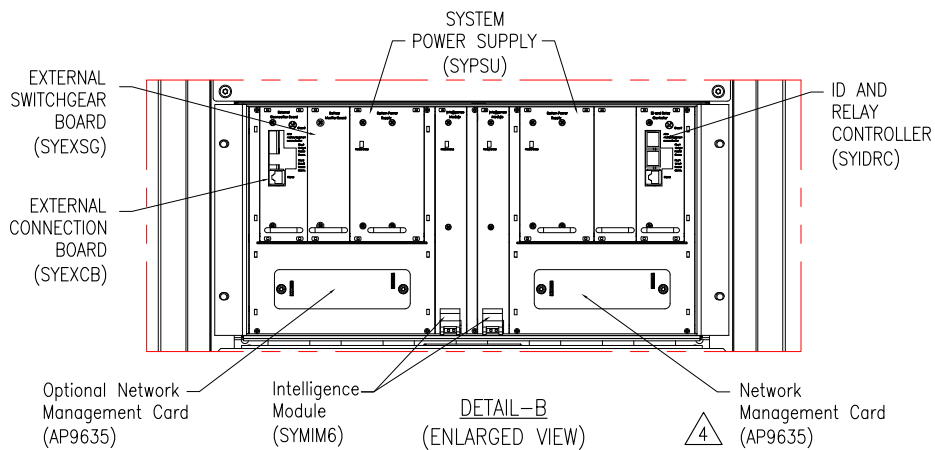
**Schneider Electric**

TITLE: SYMMETRA PX  
Input: 480V AC 3PH SINGLE/DUAL MAINS  
Output: 480V AC 3PH, 250kW  
TOP ENTRY 1MOD WITH LINE-UP MODULAR BATTERY  
UPS INPUT- OUTPUT FRAME INTERNAL VIEW  
PROJECT: DRAWINGS SHEET 8 OF 15

DWG NO: SY250K250TGC1-LB  
DRAWN BY: BALAMURUGAN  
ENGINEER: DAVID L  
APPROVED BY: PAUL B / C FLY

REV. 1  
THIRD ANGLE  
PROJECTION





DETAIL-L (ENLARGED VIEW)

NOTES:

1. INSTALLATION SHALL 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. OUTPUT RELAYS SPECIFICATION-MAXIMUM CURRENT ACCEPTED BY EACH OUTPUT RELAY IS 7.2A/250VAC.
- △ 4. ONLY ONE NMC(NETWORK MANAGEMENT CARD) IS INSTALLED AS STANDARD, THE OTHER NMC IS OPTIONAL.
5. INPUT RELAYS SPECIFICATION-MINIMUM 12VAC/DC, MAX. 28VAC/40VDC, ALL INPUTS MUST BE FROM THE SAME SOURCE.
- △ 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. ALL WIRING TO THE RELAY BOARD SHOULD BE CONSIDERED AS FIELD WIRING RATED MINIMUM 480V AC, AND MUST USE COPPER CONDUCTORS ONLY.

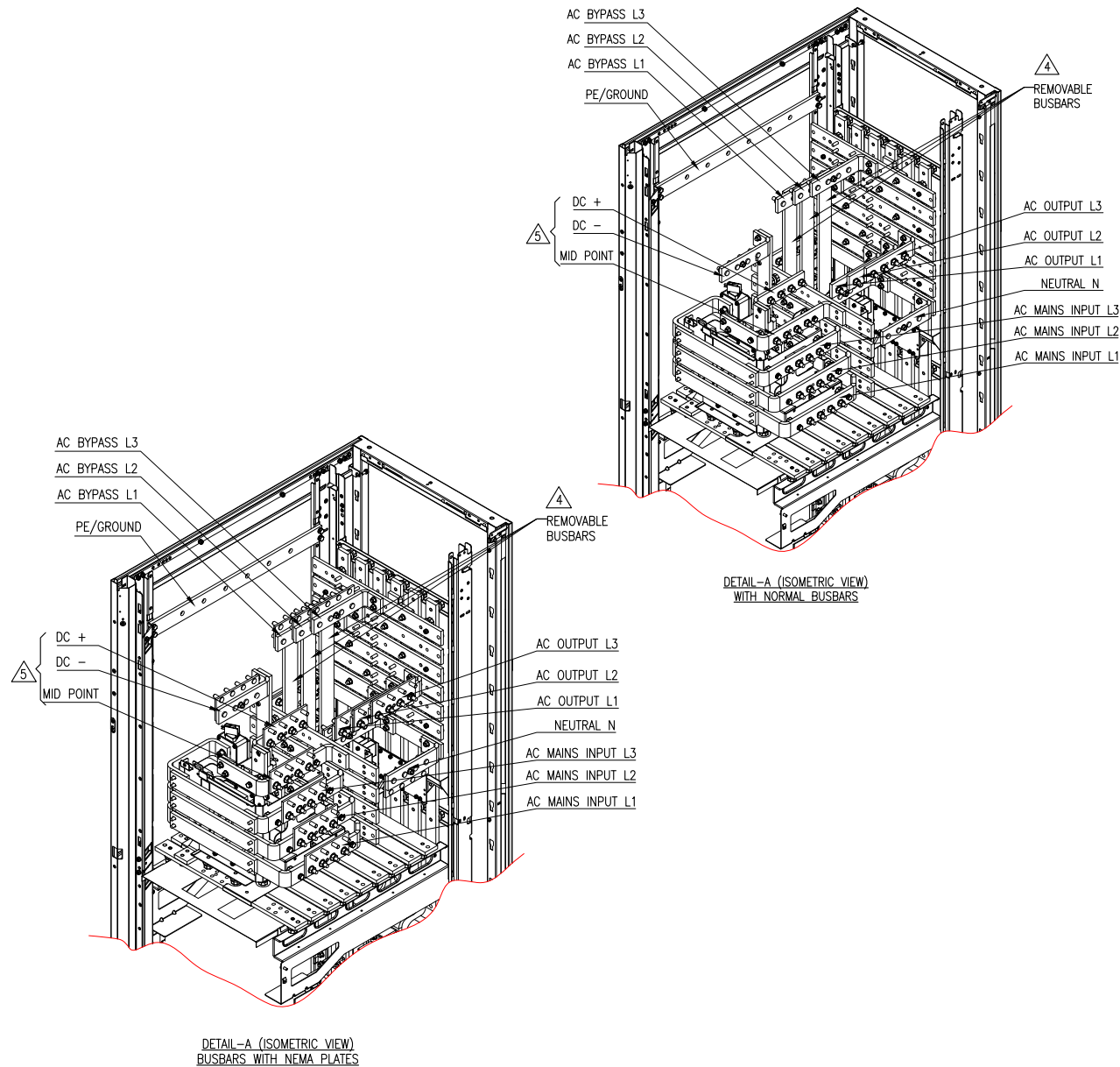
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**Schneider Electric**

TITLE: SYMMETRA PX  
Input: 480V AC 3PH SINGLE/DUAL MAINS  
Output: 480V AC 3PH, 250kW  
TOP ENTRY 1MOD WITH LINE-UP MODULAR BATTERY  
UPS INPUT- OUTPUT FRAME INTERNAL DETAILS  
PROJECT: DRAWINGS SHEET 9 OF 15

DWG NO: SY250K250TGC1-LB  
ENGINEER: JAYAPRAKASH  
APPROVED BY: DAVID L. PAUL B.  
09-FEB-16  
09-FEB-16

REV. 2  
THIRD ANGLE  
PROJECTION



DETAIL-A (ISOMETRIC VIEW)  
BUSBARS WITH NEMA PLATES

#### NOTES:

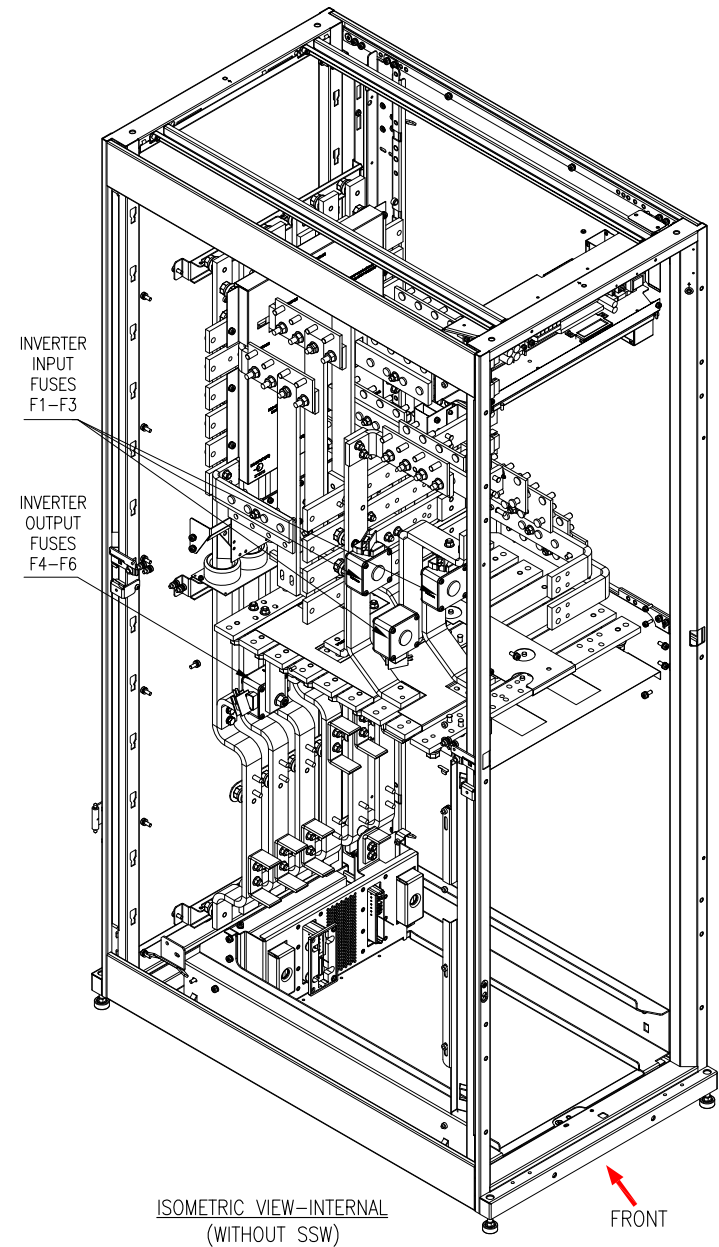
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2. REFER TO PRODUCT DOCUMENTATION FOR ADDITIONAL DETAILS PRIOR TO INSTALLATION AND SITE PREPARATION WORK.
3. SOME STRUCTURAL DETAILS HAVE BEEN OMITTED FOR THE PURPOSE OF CLARITY.

△ 4. BUSBARS SHALL BE REMOVED FOR DUAL MAINS CONFIGURATION.

△ 5. NOT REQUIRED FOR LINE UP & MATCH BATTERY SOLUTION.  
ONLY USED FOR REMOTE XR BATTERY FRAMES OR FOR THIRD PARTY BATTERY SOLUTIONS.

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**Schneider**  
Electric



ISOMETRIC VIEW-INTERNAL  
(WITHOUT SSW)

FRONT

TITLE: SYMMETRA PX  
Input: 480V AC 3PH SINGLE/DUAL MAINS  
Output: 480V AC 3PH, 250kW  
TOP ENTRY 1MOD WITH LINE-UP MODULAR BATTERY  
UPS INPUT- OUTPUT FRAME INTERNAL ISOMETRIC

DWG NO: SY250K250TGC1-LB

REV. 1

DRAWN BY: BALAMURUGAN 25-FEB-15

THIRD

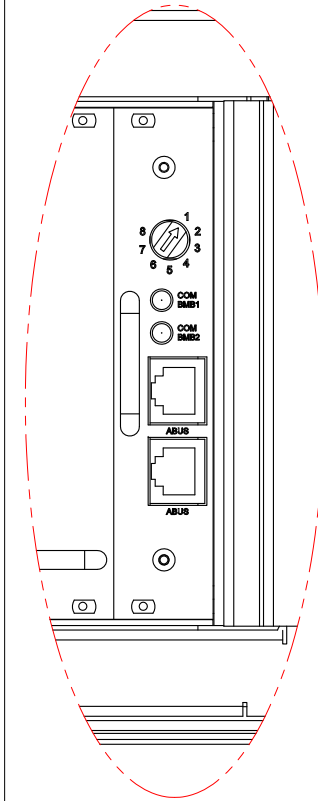
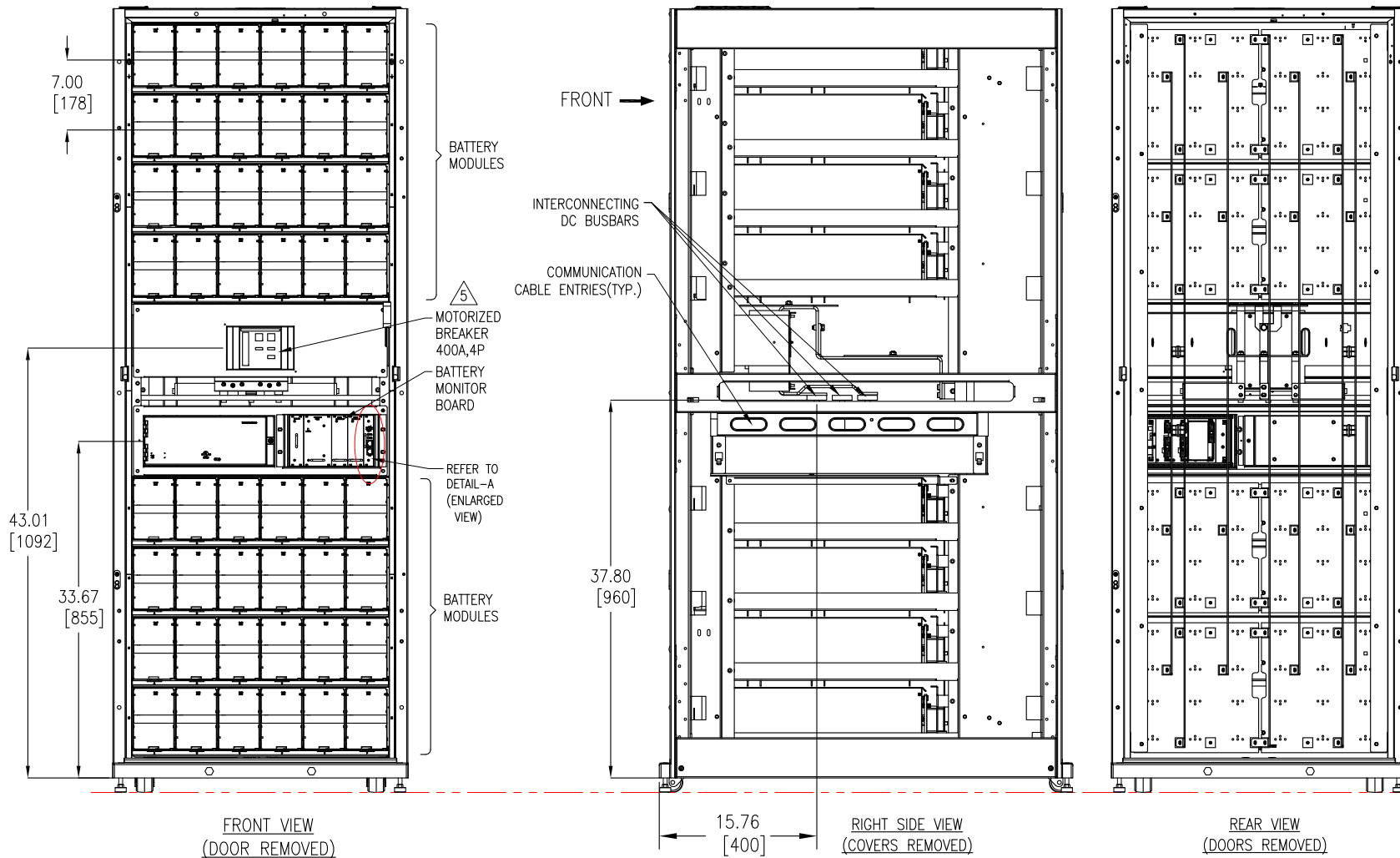
ENGINEER: DAVID L 25-FEB-15

ANGLE

APPROVED BY: PAUL B / C FLY 25-FEB-15

PROJECTION

PROJECT: DRAWINGS SHEET 10 OF 15



DETAIL-A  
(ENLARGED VIEW)

#### NOTES:

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3. ALL DIMENSIONS ARE IN INCHES[MILLIMETERS].
4. SOME STRUCTURAL DETAILS OMITTED FOR CLARITY PURPOSE.
- △ 5. CIRCUIT BREAKER (MOTORIZED), ABB, 400A 600V 4POLE T5, WITH 24V DC SHUNT TRIP AND AUX. CONTACT. MOTORIZED BREAKER TRIP UNIT ACTIVATED THROUGH EPO/UPS 24V DC SIGNAL.

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**Schneider Electric**

TITLE: SYMMETRA PX  
Input: 480V AC 3PH SINGLE/DUAL MAINS  
Output: 480V AC 3PH, 250kW  
TOP ENTRY 1MOD WITH LINE-UP MODULAR BATTERY  
BATTERY FRAME INTERNAL VIEW

PROJECT: DRAWINGS SHEET 11 OF 15

DWG NO: SY250K250TGC1-LB

DRAWN BY: BALAMURUGAN 29-OCT-13

ENGINEER: DAVID L. 29-OCT-13

APPROVED BY: PAUL B. 29-OCT-13

REV. 0

THIRD

ANGLE

PROJECTION

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

DEVICE RATING					
DEVICE	RATING	TYPE	MAKE	MODEL	ACCESSORIES
DC DISCONNECT	400A, 600V DC	4P MCCB	ABB	T5	1Aux.contact, 24VDC, Shunt trip, Actuator
INVERTER FUSES F1-F3 / F4-F6	1250A, 700V	HIGH SPEED FUSE	BUSSMANN	170M6466	--
SSW FUSES F1-F3	630A, 700V	HIGH SPEED FUSE	BUSSMANN	170M5162	--

- NOTES:
1. INSTALLATION SHALL 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. DRAWING DEPICTS POWER SYSTEM CONNECTIONS AND IS NOT REPRESENTATIVE OF PHYSICAL LAYOUT, PLEASE REFER TO MECHANICAL DRAWINGS FOR PHYSICAL LAYOUT.
  - △4. MAXIMUM RATED SHORT CIRCUIT CURRENT IS 50KAIC.
  - △5. FOR 3 WIRE SYSTEM :  
AC MAINS UTILITY SOURCE SHALL BE 480VAC, 3Ø, SOLIDLY GROUNDED WYE, 3 WIRE+GROUND.  
FOR 4 WIRE SYSTEM :  
AC MAINS UTILITY SOURCE SHALL BE 480VAC, 3Ø, SOLIDLY GROUNDED WYE, 4 WIRE+GROUND.  
CONTACT Schneider Electric IF OTHER. REFER TO SHEET-14 FOR SITE PLANNING DATA.
  - △6. FOR 3 WIRE SYSTEM : AC CABLING SHALL BE 600V RATED, 3 WIRE+GROUND.  
FOR 4 WIRE SYSTEM : AC CABLING SHALL BE 600V RATED, 4 WIRE+GROUND.
  - △7. THE NEUTRAL TO GROUND SYSTEM BONDING JUMPER PROVIDED BY Schneider Electric, SHALL BE INSTALLED ONLY FOR 3 WIRE OUTPUT CONFIGURATION, SHALL NOT BE INSTALLED FOR THE 4 WIRE OUTPUT CONFIGURATION. SEE INSTALLATION MANUAL FOR DETAILS.
  - △8. THIS DRAWING SHOWS MINIMUM NUMBER OF BATTERY FRAMES. MAXIMUM (8) XR BATTERY FRAMES CAN BE USED. XR BATTERY FRAME HAS MOTORIZED BREAKER.
  9. BATTERY SIZING BASED ON MAXIMUM 1 VOLT DROP PER HALF-STRING AT NORMAL RATED DC CURRENT. CE SHALL ADJUST CABLE SIZE BASED ON INSTALLATION PARAMETERS.
  - △10. SINGLE MAINS IS A DEFAULT CONFIGURATION. BUS BAR LINKS MUST BE PRESENT FOR SINGLE MAINS INSTALLATION.
  11. CABLE LUGS ARE NOT PROVIDED.

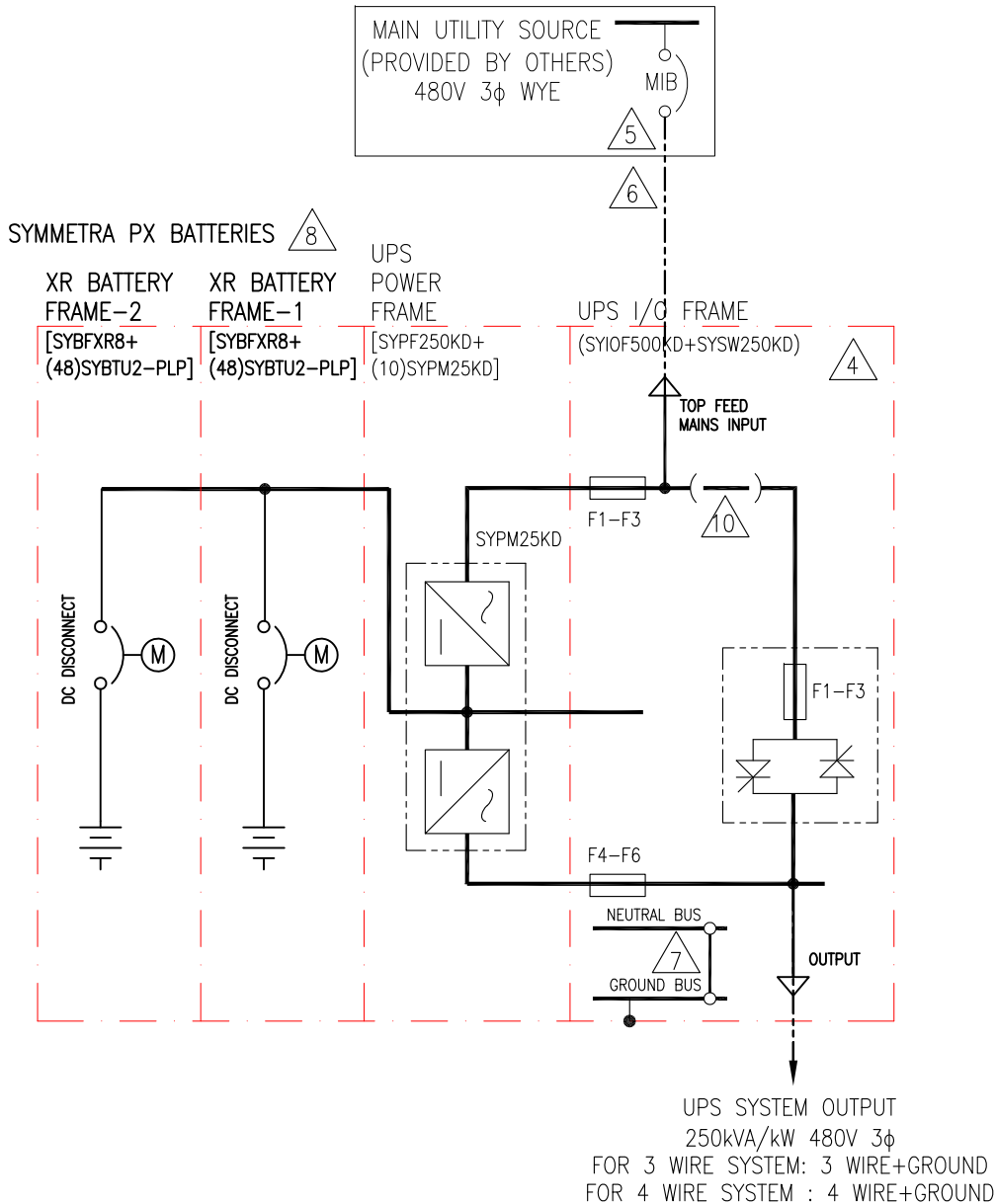
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TITLE: SYMMETRA PX  
 Input: 480V AC 3PH SINGLE/DUAL MAINS  
 Output: 480V AC 3PH, 250kW  
 TOP ENTRY 1MOD WITH LINE-UP MODULAR BATTERY  
 SYSTEM ONE LINE DIAGRAM-SINGLE MAINS  
 PROJECT: DRAWINGS SHEET 12 OF 15

DWG NO: SY250K250TGC1-LB  
 DRAWN BY: BALAMURUGAN/S CUNHA  
 ENGINEER: D LOEWENSTEIN/P BOUCHER  
 APPROVED BY: B SHERIDAN/C FLY

REV. 2  
 25-FEB-15  
 25-FEB-15  
 25-FEB-15  
 ANGLE  
 PROJECTION:  
 N/A



<b>LEGEND:</b>	
-----	AC CABLE - PROVIDED BY OTHERS

DEVICE RATING					
DEVICE	RATING	TYPE	MAKE	MODEL	ACCESSORIES
DC DISCONNECT	400A, 600V DC	4P MCCB	ABB	T5	1Aux.contact, 24VDC, Shunt trip, Actuator
INVERTER FUSES F1-F3 / F4-F6	1250A, 700V	HIGH SPEED FUSE	BUSSMANN	170M6466	--
SSW FUSES F1-F3	630A, 700V	HIGH SPEED FUSE	BUSSMANN	170M5162	--

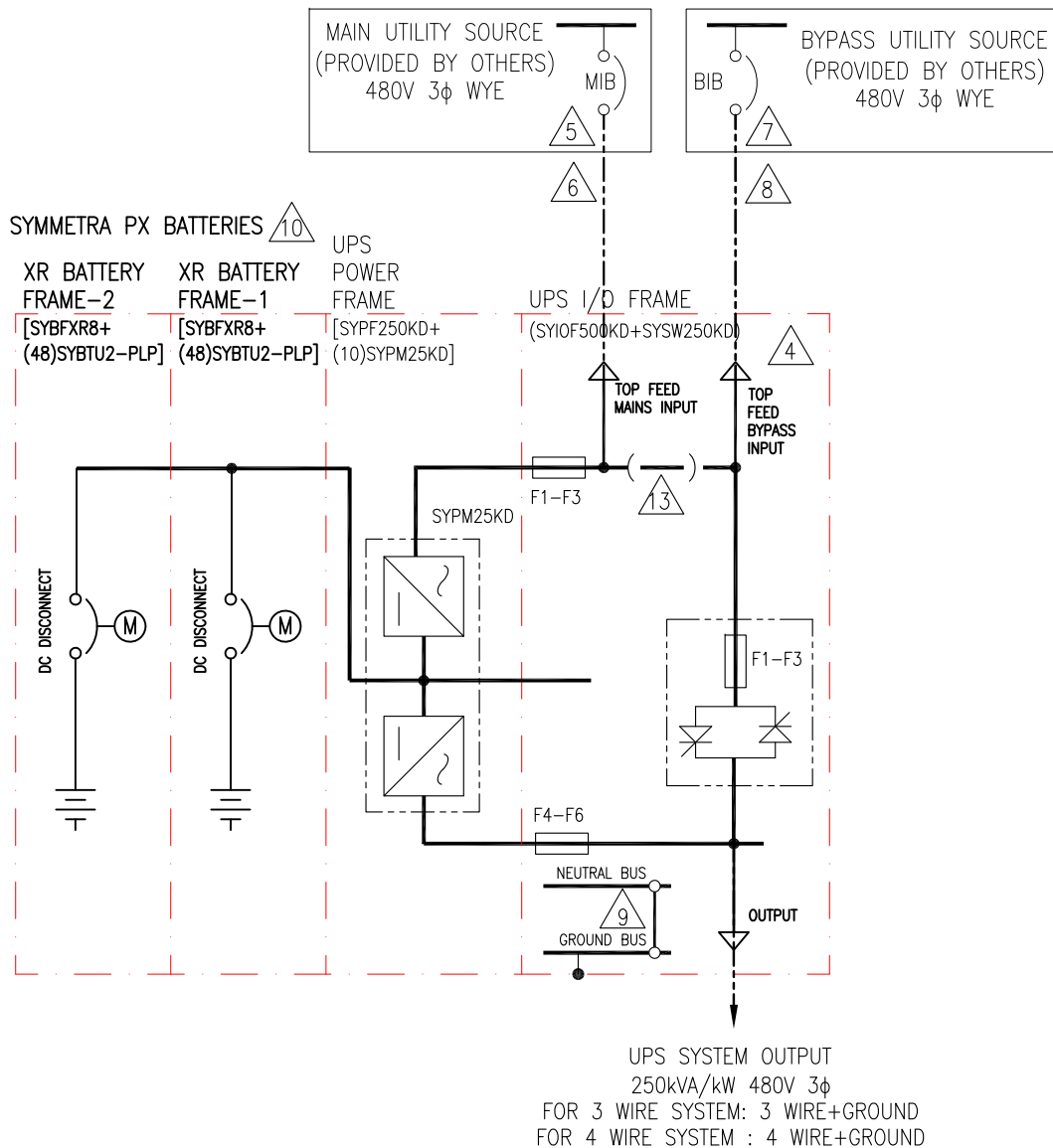
- NOTES:**
1. INSTALLATION SHALL COMPLY WITH ALL APPLICABLE NATIONAL,STATE AND LOCAL CODES.
  2. REFER TO PRODUCT DOCUMENTATION FOR ADDITIONAL DETAILS PRIOR TO INSTALLATION AND SITE PREPARATION WORK.
  3. DRAWING DEPICTS POWER SYSTEM CONNECTIONS AND IS NOT REPRESENTATIVE OF PHYSICAL LAYOUT, PLEASE REFER TO MECHANICAL DRAWINGS FOR PHYSICAL LAYOUT.
  - △4. MAXIMUM RATED SHORT CIRCUIT CURRENT IS 50KAIC.
  - △5. FOR 3 WIRE SYSTEM :  
AC MAINS UTILITY SOURCE SHALL BE 480VAC, 3ø, SOLIDLY GROUNDED WYE, 3 WIRE+GROUND.  
FOR 4 WIRE SYSTEM :  
AC MAINS UTILITY SOURCE SHALL BE 480VAC, 3ø, SOLIDLY GROUNDED WYE, 3 WIRE+GROUND.  
CONTACT Schneider Electric IF OTHER. REFER TO SHEET-14 FOR SITE PLANNING DATA.
  - △6. FOR 3 WIRE SYSTEM : AC CABLING SHALL BE 600V RATED, 3 WIRE+GROUND.  
FOR 4 WIRE SYSTEM : AC CABLING SHALL BE 600V RATED, 3 WIRE+GROUND.
  - △7. FOR 3 WIRE SYSTEM :  
AC BYPASS UTILITY SOURCE SHALL BE 480VAC, 3ø, SOLIDLY GROUNDED WYE, 3 WIRE+GROUND.  
FOR 4 WIRE SYSTEM :  
AC BYPASS UTILITY SOURCE SHALL BE 480VAC, 3ø, SOLIDLY GROUNDED WYE, 4 WIRE+GROUND.  
CONTACT Schneider Electric IF OTHER. REFER TO SHEET-14 FOR SITE PLANNING DATA.
  - △8. FOR 3 WIRE SYSTEM : AC CABLING SHALL BE 600V RATED, 3 WIRE+GROUND.  
FOR 4 WIRE SYSTEM : AC CABLING SHALL BE 600V RATED, 4 WIRE+GROUND.
  - △9. THE NEUTRAL TO GROUND SYSTEM BONDING JUMPER PROVIDED BY Schneider Electric, SHALL BE INSTALLED ONLY FOR 3 WIRE OUTPUT CONFIGURATION, SHALL NOT BE INSTALLED FOR THE 4 WIRE OUTPUT CONFIGURATION. SEE INSTALLATION MANUAL FOR DETAILS.
  - △10. THIS DRAWING SHOWS MINIMUM NUMBER OF BATTERY FRAMES. MAXIMUM (8) XR BATTERY FRAMES CAN BE USED. XR BATTERY FRAME HAS MOTORIZED BREAKER.
  11. BATTERY SIZING BASED ON MAXIMUM 1 VOLT DROP PER HALF-STRING AT NORMAL RATED DC CURRENT. CE SHALL ADJUST CABLE SIZE BASED ON INSTALLATION PARAMETERS.
  12. CABLE LUGS ARE NOT PROVIDED.
  - △13. SINGLE MAINS IS A DEFAULT CONFIGURATION. BUS BAR LINKS SHALL BE REMOVED FOR DUAL MAINS CONFIGURATION.

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<b>TITLE:</b>	
SYMMETRA PX	
Input: 480V AC 3PH SINGLE/DUAL MAINS	
Output: 480V AC 3PH, 250kW	
TOP ENTRY 1MOD WITH LINE-UP MODULAR BATTERY	
SYSTEM ONE LINE DIAGRAM-DUAL MAINS	
<b>PROJECT:</b> DRAWINGS	<b>SHEET</b> 13 OF 15

<b>DWG NO:</b>	
SY250K250TGC1-LB	
<b>REV.</b> 2	
<b>DRAWN BY:</b> BALAMURUGAN/S CUNHA	25-FEB-15
<b>ENGINEER:</b> D LOEWENSTEIN/P BOUCHER	25-FEB-15
<b>APPROVED BY:</b> B SHERIDAN/C FLY	25-FEB-15
<b>PROJECTION:</b>	N/A





Symmetra™ PX 250kW UPS 1 Module Site Planning Data - Single/Dual Feed - 3 Wire/ 4Wire

UPS Rating				Voltage(VAC)		Mains AC Input - (MIB) <sup>1</sup>						Bypass AC Input - (BIE) <sup>2</sup>						External Battery System <sup>3, 6</sup>						AC Output <sup>2</sup>						Mechanical Data (UPS+I/O Frame only) <sup>5, 11</sup>			
						Current(A)		Recommendations <sup>3</sup>				Current(A)		Recommendations <sup>3, 4</sup>				Nominal VDC	Battery kW	Current @ Nom. VDC (A)	Recommendations		Current(A)		Recommendations <sup>3</sup>				Typical Dmensions (HxWxD) inch [mm]	Average Weight Lbs [kg]	Floor Loading Lbs/Ft <sup>2</sup> [kg/m <sup>2</sup> ]	Heat Rejection Battery Fully Charged BTU/HR	
UPS Frame Rating	Qty of 25kW Power Modules <sup>9</sup>	kVA	kW	Input <sup>1</sup>	Output <sup>2</sup>	Full Load	Max. <sup>7</sup>	100% OCPD	100% Cable	80% OCPD	80% Cable	NOM.	Max. <sup>8</sup>	100% OCPD	100% Cable	80% OCPD	80% Cable				100% OCPD	100% Cable	NOM.	Max. <sup>8</sup>	100% OCPD	100% Cable	80% OCPD	80% Cable					
250kVA/250kW 1x 250K Frame	4	100	100	480	480	139	149	150A	1x 1/0	175A	1x 2/0	120	150	125A	1x 1	150A	1x 1/0	2x 288	104	181	200A	1x 3/0	120	150	125A	1x 1	150A	1x 1/0	73.4x62.7x42 [1591x1592x1067]	2446 [1112]	134 [655]	14217	
	5	125	125	480	480	173	186	200A	1x 3/0	225A	1x 4/0	150	188	150A	1x 1/0	200A	1x 3/0	2x 288	130	226	250A	1x 4/0	150	188	150A	1x 1/0	200A	1x 3/0		2539 [1154]	139 [679]	17771	
	6	150	150	480	480	208	223	225A	1x 4/0	300A	1x 300	180	226	200A	1x 3/0	250A	1x 4/0	2x 288	156	271	300A	1x 300	180	226	200A	1x 3/0	250A	1x 4/0		2631 [1196]	144 [734]	21325	
	7	175	175	480	480	242	261	300A	1x 300	350A	1x 350	210	263	225A	1x 4/0	300A	1x 300	2x 288	182	316	350A	1x 400	210	263	225A	1x 4/0	300A	1x 300		2724 [1238]	149 [729]	24879	
	8	200	200	480	480	277	298	300A	1x 350	350A	1x 500	241	301	250A	1x 250	350A	1x 350	2x 288	208	362	400A	1x 500	241	301	250A	1x 250	350A	1x 350		2816 [1280]	154 [754]	28433	
	9	225	225	480	480	312	335	350A	1 x 4/0	400A	2x 3/0	271	338	300A	1x 300	350A	1x 500	2x 288	234	407	450A	2x 4/0	271	338	300A	1x 300	350A	1x 500		2908 [1322]	159 [778]	31988	
	10 <sup>9</sup>	250	250	480	480	346	372	400A	1x 500	450A	2x 4/0	301	376	350A	1x 350	400A	1x 500	2x 288	260	452	500A	2x 4/0	301	376	350A	1x 350	400A	1x 500		3000 [1364]	154 [803]	35542	

Symmetra™ PX

Notes.

1. For 3 wire System :  
Single Mains:- Mains Input source must be 480V Wye 3-wire + Ground. Contact Schneider Electric if other.  
Dual Mains:- Mains/Bypass Input source must be 480V Wye 3-wire + Ground. Contact Schneider Electric if other.
- For 4 Wire System :  
Single Mains :- Mains Input source must be 480V Wye 4 wire + Ground. Contact Schneider Electric if other.  
Dual Mains:- Mains input source must be 480V Wye 3 wire + Ground and the Bypass input source must be 480V Wye 4 wire +Ground. Contact Schneider Electric if other.
2. For 3 wire System :  
Output is 480V Wye 3-wire + Ground. The bypass source must match the output configuration
- For 4 Wire System :  
Output is 480V Wye 4-wire + Ground. The bypass source must match the output configuration
3. Recommended cables are AWG/kcmil minimum requirement for three (3) current carrying conductors in raceway sized for 30°C environment and 75°C terminations.  
All cabling must comply with installation site conditions and any applicable Local and or National codes.
4. Ratings of the cables and over current devices supplied for information only. User to consult with their engineering services before adopting.
5. Mechanical Data is approximate and does not include the battery system or external DC Disconnects. For precise mechanical data on your planned system configuration contact Schneider Electric.
- 6.Contact Schneider Electric for assistance with all external battery designs. Maximum allowed DC cabling voltage drop is 1 VDC. Schneider Electric Standard external DCD's are rated 500A (PX 250kVA) & 1000A (PX 500kVA)
7. Electronic Input Current Limit
8. This is the UPS short time rating of 125% Overload for 10 minutes. Actual short time performance may be limited by the overcurrent protective device selected.
9. For maximum scalability or future expansion it is recommended that the UPS frames be installed at their full ratings - see bold text data.
10. All OCPD's and cabling are by others.
11. Heat rejection calculations are based on watt to BTU/HR conversion factor of 1 watt = 3.412 BTU/HR
12. OCPD = Over Current Protective Device
13. All wirings to be in accordance with all applicable national and/or local electrical codes.
14. Control wiring and power wiring must be run in separate conduit.
15. Input: THDI < 5% at full load.
16. Output: THDU < 2% Linear Load, < 3% Non Linear Load.
17. 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	95.2%	96.2%	96.3%	96.3%

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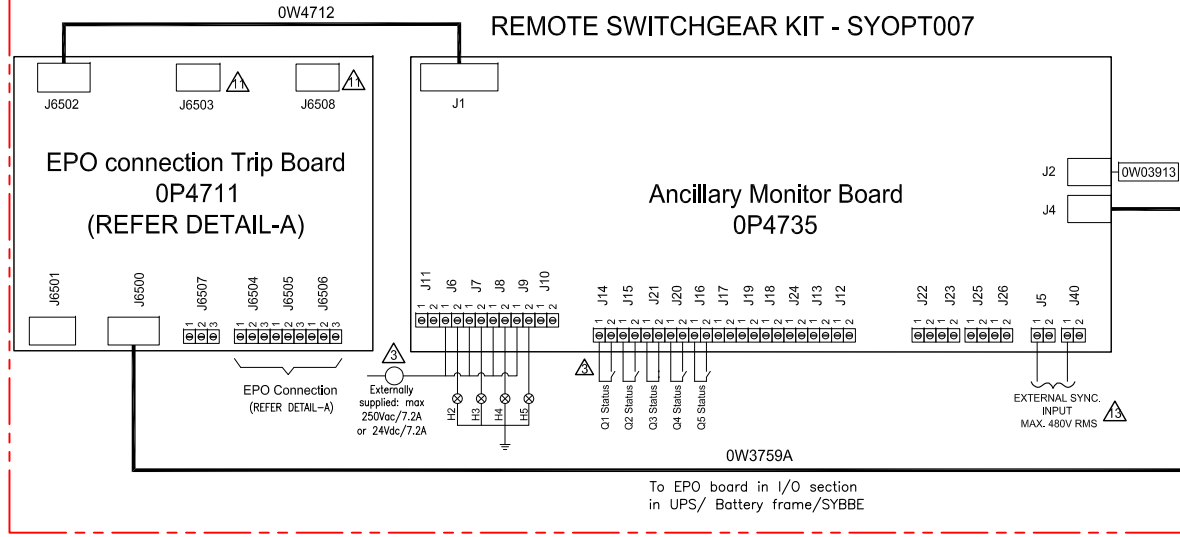


TITLE: SYMMETRA PX  
Input: 480V AC 3PH SINGLE/DUAL MAINS  
Output: 480V AC 3PH, 250kW  
TOP ENTRY 1MOD WITH LINE-UP MODULAR BATTERY  
SITE PLANNING DATA  
PROJECT: DRAWINGS SHEET 14 OF 15

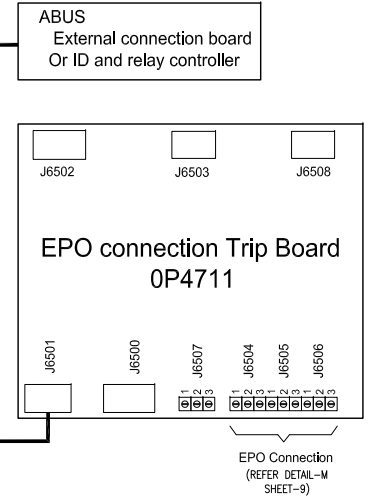
DWG NO: SY250K250TGC1-LB  
DRAWN BY: BALAMURUGAN  
ENGINEER: DAVID L  
APPROVED BY: PAUL B

REV. 0  
29-OCT-13  
29-OCT-13  
ANGLE PROJECTION  
N/A

THIRD PARTY  
Maintenance  
Bypass  
Panel  
(MBP)

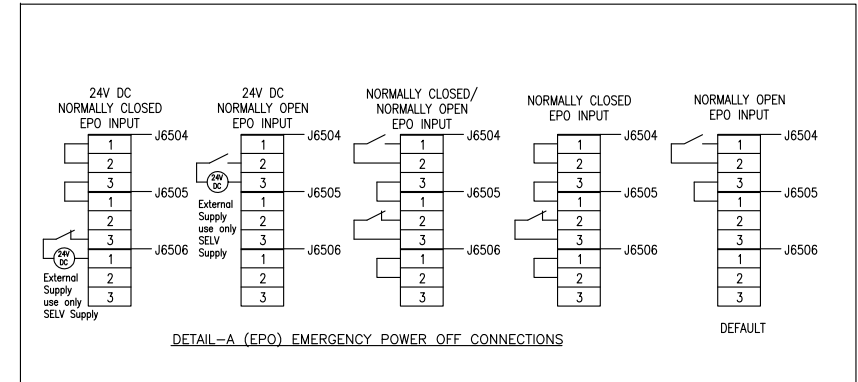


## Input/Output Panel -SYIOF500KD



## 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. INSTALL TERMINATOR 0W03913 IN THE J2 TERMINAL ON THE AMB.
6. CONNECT THE ABUS CABLE(0W3758C) FROM J4 ON THE AMB(0P4735) TO THE ABUS TERMINAL EXTERNAL CONNECTION BOARD OR ID AND RELAY CONTROLLER ON THE FRONT OF THE INPUT/OUTPUT ENCLOSURE.
7. CONNECT THE ECT CABLE(0W3759A) FROM J6500 ON THE ECT BOARD(0P4711) IN THE MBP TO J6501 ON THE ECT BOARD(0P4711) IN THE TOP OF THE INPUT/OUTPUT ENCLOSURE.
8. CONNECT A NORMALLY OPEN(NO) AUXILIARY SWITCH Q1,Q2,Q3,Q4,Q5 STATUS. Q1 IS MANDATORY AND Q2,Q4 AND Q5 ARE OPTIONAL DEPENDING ON INSTALLATION. IF THE INPUTS ARE NOT USED, JUMPERS MUST BE INSTALLED,
9. CONNECT NORMALLY CLOSED(NC) AUXILIARY FOR Q3 STATUS.
10. CONNECT H2 TO H5 LAMPS FOR PERMISSION TO OPERATE Q2 TO Q5 (MAX, 7.2A/250V AC).
- △ 11. 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 TO J6503 PIN2 AND PIN3: 1 TYCO 1-48700-0, M&L 3-POSITION PLUG HOUSING AND 2 TYCO 350218-3 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-POSITION PLUG HOUSING AND 2 TYCO 350218-3 M&L PIN, AWG 20-14 (NOT SUPPLIED).
12. CONNECT CONTACT FOR DOOR OPEN/CLOSE. IF THE INPUT IS NOT USED, JUMPERS MUST BE INSTALLED.
- △ 13. OPTION: CONNECT EXTERNAL SYNCHRONIZATION CABLES FROM L1 AND L2 OF THE PREFERRED AC SOURCE TO J5(L1) AND J40(L2).
14. INSTALL 1A FUSE ON EACH PHASE ON THE EXTERNAL SYNC CABLE AT THE SYNC SOURCE.



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**Schneider Electric**

TITLE: SYMMETRA PX  
Input: 480V AC 3PH SINGLE/DUAL MAINS  
Output: 480V AC 3PH, 250kW  
TOP ENTRY 1MOD WITH LINE-UP MODULAR BATTERY  
SYSTEM WIRING DIAGRAM

PROJECT: DRAWINGS SHEET 15 OF 15

DWG NO: SY250K250TGC1-LB

DRAWN BY: BALAMURUGAN 29-OCT-13

ENGINEER: DAVID L. 29-OCT-13

APPROVED BY: PAUL B. 29-OCT-13

REV: 0

ANGLE

PROJECTION:

N/A