
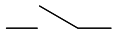


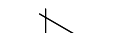
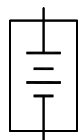
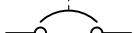
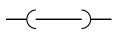

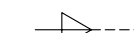
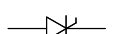
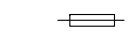

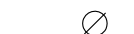



# Symmetra PX 250kW 3 wire Dual Mains Top Entry 2 MOD with Line-up Modular Battery

Sheet No.	Component /Detail	Description
1	Draw ing Guide	Symmetra PX 250kW 3-w ire Dual Mains Top Entry 2 MOD w ith Line-up Modular Battery Draw ing Guide.
2	Solution Isometric	Symmetra PX 250kW 3-w ire Dual Mains Top Entry 2 MOD w ith Line-up Modular Battery Solution Isometric
3	Run time Details	Symmetra PX 250kW 3-w ire Dual Mains Top Entry 2 MOD w ith Line-up Modular Battery Runtime Details
4	Solution General Arrangements	Symmetra PX 250kW 3-w ire Dual Mains Top Entry 2 MOD w ith Line-up Modular Battery Solution General Arrangements
5	Solution Anchoring Details	Symmetra PX 250kW 3-w ire Dual 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	System One Line Diagram	Symmetra PX 250kW 3-w ire Dual Mains Top Entry 2 MOD w ith Line-up Modular Battery System One Line Diagram
12	Site Planning data	Symmetra PX 250kW 3-w ire Dual Mains Top Entry 2 MOD w ith Line-up Modular Battery Site Planning data
13	System Wiring Diagram	Symmetra PX 250kW 3-w ire Dual 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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TITLE: SYMMETRA PX  
Input: 480V AC 3PH DUAL MAINS  
Output: 480V AC 3PH 500kW  
TOP ENTRY 2 MOD W/ LINE-UP MODULAR BATTERY  
DRAWING GUIDE

PROJECT: DRAWINGS SHEET 1 OF 13

DWG NO: SY250K500TG2C2-3W-LB

DRAWN BY: RAMESH B 12-APR-12

ENGINEER: M.LEPARD/A.WARNER 12-APR-12

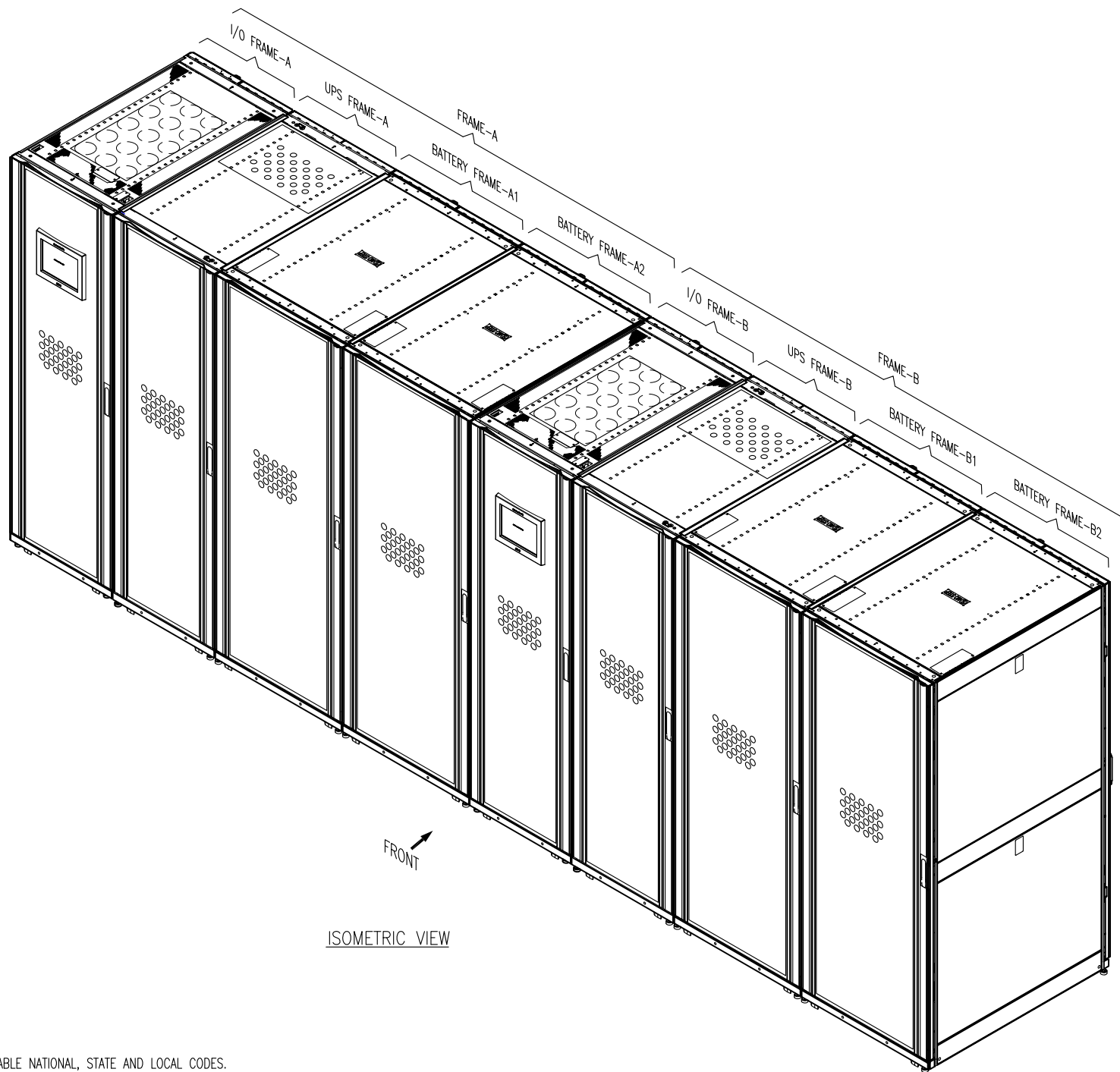
APPROVED BY: B.SHERIDAN/E.SILVA 12-APR-12

REV. 0

ANGLE

PROJECTION

N/A



#### 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.
4. FRONT SERVICE ACCESS IS REQUIRED.

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**Schneider**  
Electric

TITLE: SYMMETRA PX  
Input: 480V AC 3PH DUAL MAINS  
Output: 480V AC 3PH 500kW  
TOP ENTRY 2 MOD W/ LINE-UP MODULAR BATTERY  
SOLUTION ISOMETRIC

PROJECT: DRAWINGS SHEET 2 OF 13

DWG NO: SY250K500TG2C2-3W-LB

DRAWN BY: JAYAPRAKASH 03-FEB-15

ENGINEER: D LOEWENSTEIN/P BOUCHER 03-FEB-15

APPROVED BY: B SHERIDAN 03-FEB-15

REV. 2

THIRD

ANGLE

PROJECTION

100 - 250kW TOP FEED SINGLE/DUAL MAINS 2 MODULE WITH LINE-UP BATTERIES (6min to 105min) <sup>△5</sup>																																			
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	
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	
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	

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. 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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TITLE: SYMMETRA PX  
Input: 480V AC 3PH DUAL MAINS  
Output: 480V AC 3PH 500kW  
TOP ENTRY 2 MOD W/ LINE-UP MODULAR BATTERY  
SOLUTION RUNTIME DETAILS

PROJECT: DRAWINGS SHEET 3 OF 13

DWG NO: SY250K500TG2C2-3W-LB

DRAWN BY: RAMESH B 12-APR-12

ENGINEER: M.LEPARD/A.WARNER 12-APR-12

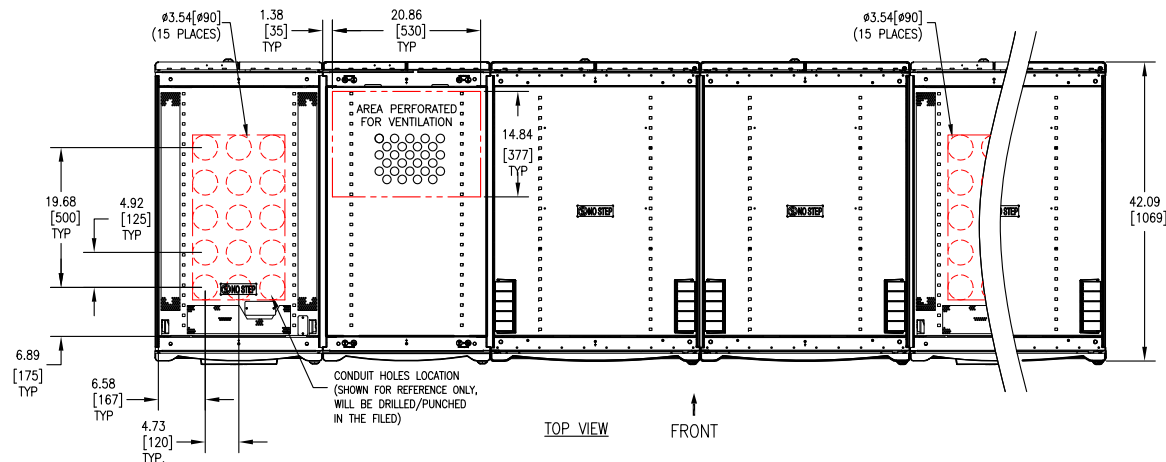
APPROVED BY: B.SHERIDAN/E.SILVA 12-APR-12

REV. 0

ANGLE

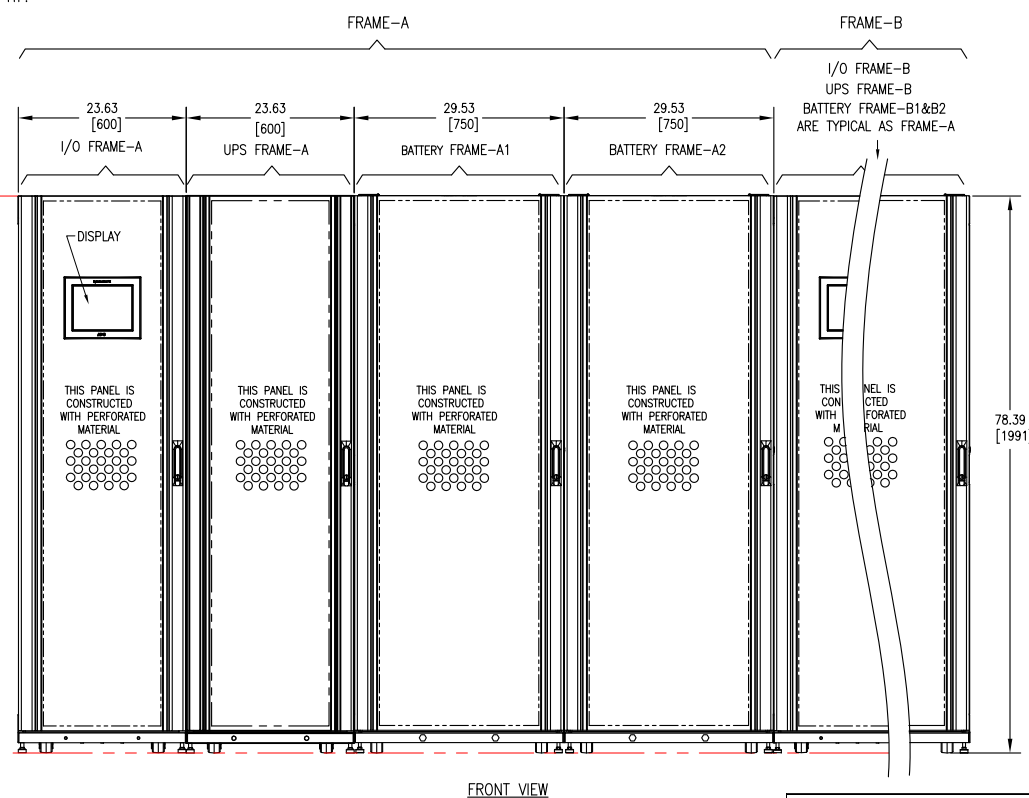
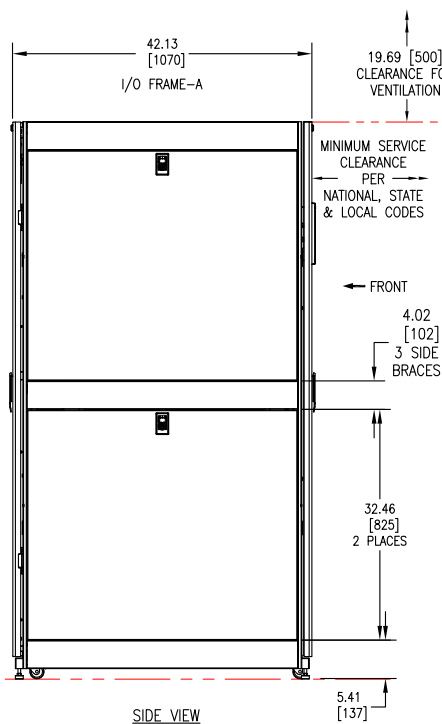
PROJECTION

N/A

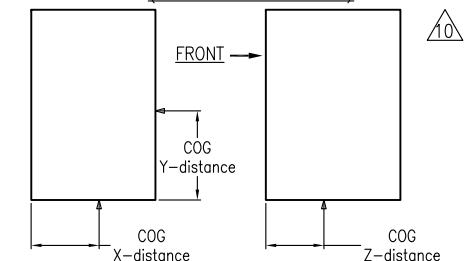


#### NOTES:

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 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.



#### CENTER OF GRAVITY DETAILS BATTERY FRAME/UPS FRAME/INPUT-OUTPUT FRAME (REFER TO COG TABLE)



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]

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]

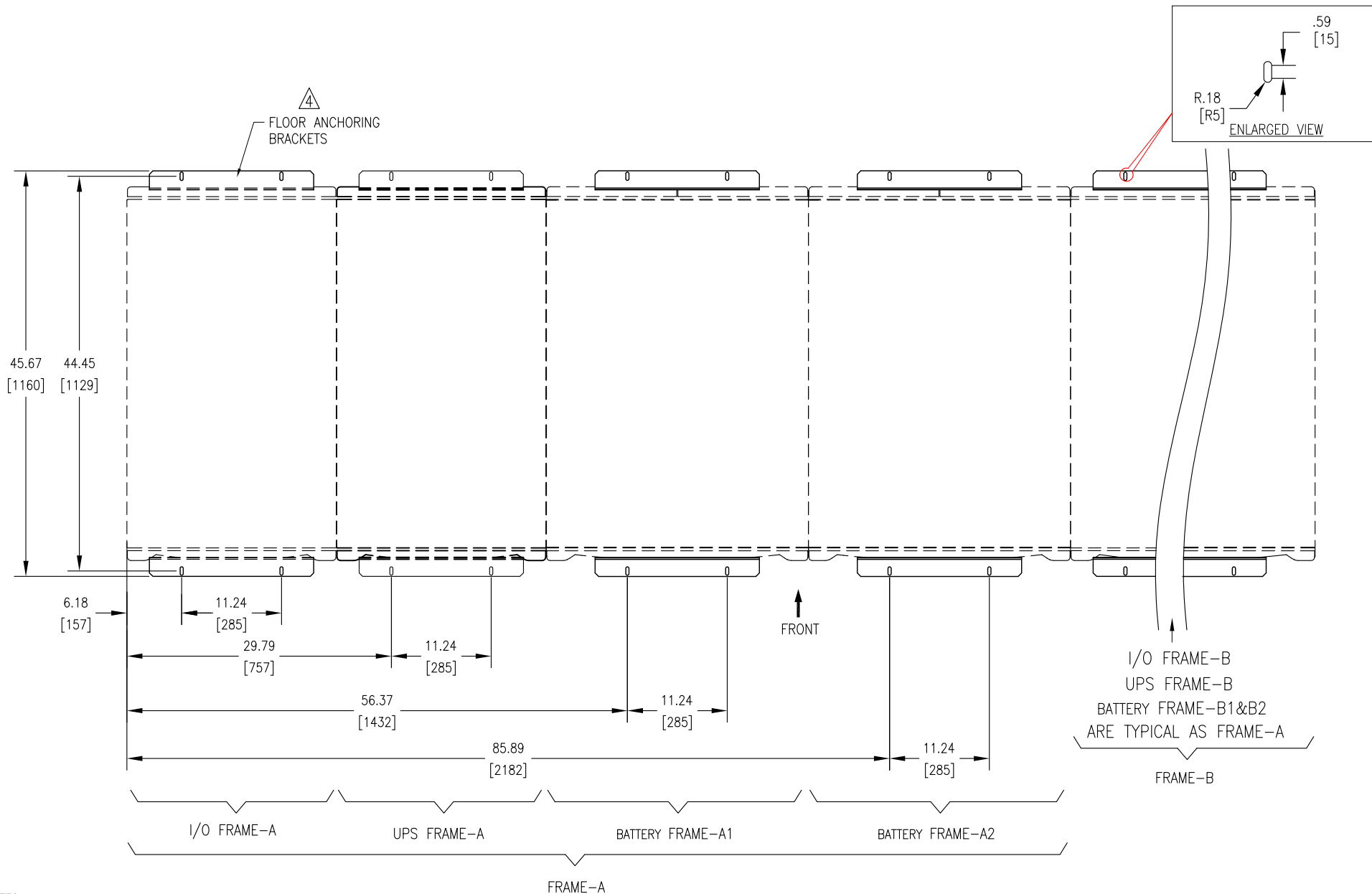
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**Schneider Electric**

TITLE: SYMMETRA PX  
 Input: 480V AC 3PH DUAL MAINS  
 Output: 480V AC 3PH 500kW  
 TOP ENTRY 2 MOD W/ LINE-UP MODULAR BATTERY  
 SOLUTION GENERAL ARRANGEMENT

PROJECT: DRAWINGS SHEET 4 OF 13

DWG NO: SY250K500TG2C2-3W-LB  
 DRAWN BY: JAYAPRAKASH/BALA  
 ENGINEER: M.LEPARD  
 APPROVED BY: M.LEPARD  
 DATE: 26-FEB-16  
 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. IF REAR BRACKET IS USED. 29.92 [760mm] REAR CLEARANCE IS REQUIRED FOR INSTALLATION.

FLOOR ANCHORING DETAILS

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**Schneider Electric**

TITLE: SYMMETRA PX  
Input: 480V AC 3PH DUAL MAINS  
Output: 480V AC 3PH 500kW  
TOP ENTRY 2 MOD W/ LINE-UP MODULAR BATTERY  
SOLUTION ANCHORING

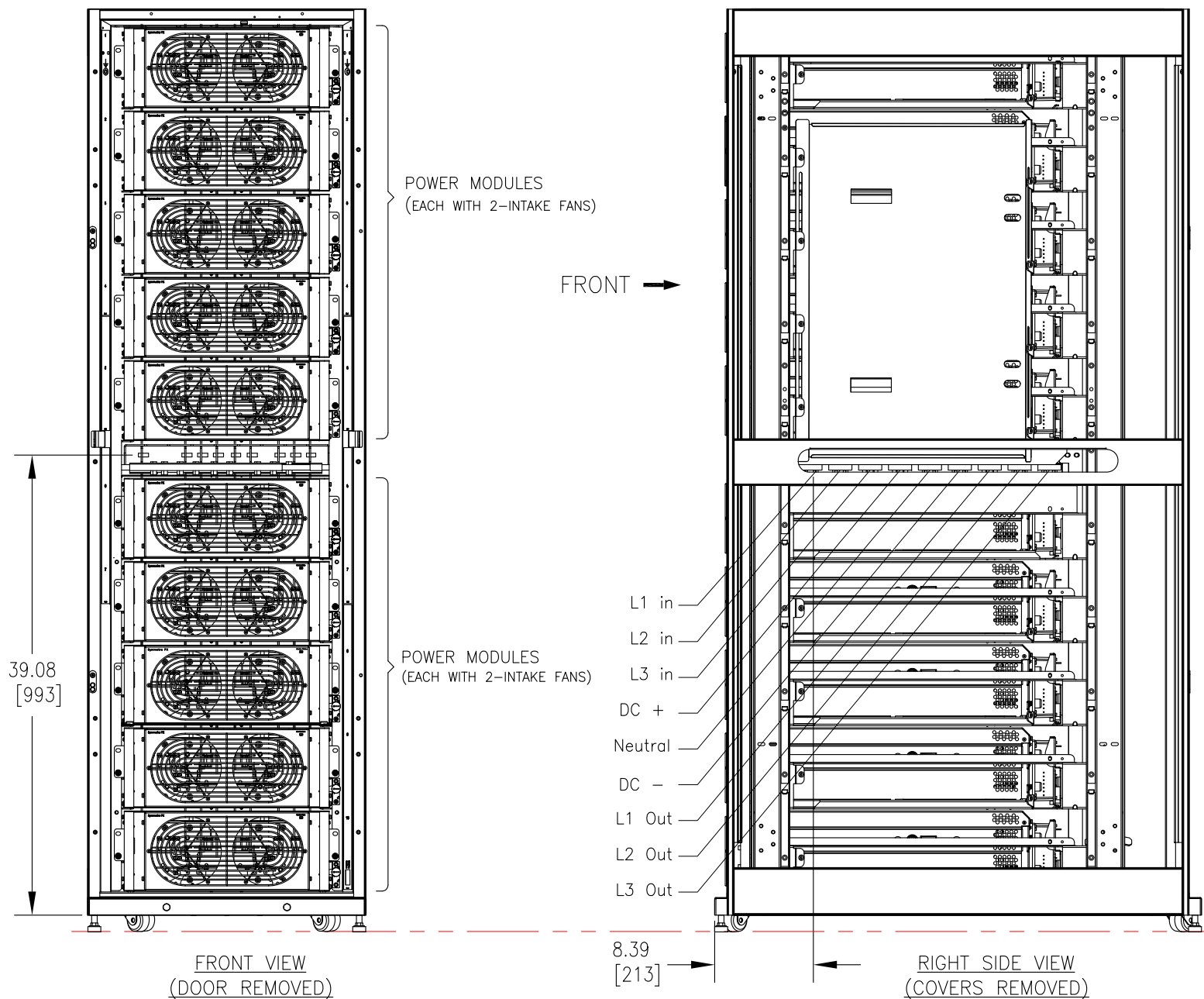
DWG NO: SY250K500TG2C2-3W-LB

REV. 0

DRAWN BY: RAMESH B 12-APR-12  
ENGINEER: M.LEPARD/A.WARNER 12-APR-12

PROJECT: DRAWINGS SHEET 5 OF 13 APPROVED BY: B.SHERIDAN/E.SILVA 12-APR-12

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. SOME STRUCTURAL DETAILS HAVE BEEN OMITTED FOR THE PURPOSE OF CLARITY.
  5. EITHER 600mm OR 29.92 [750mm] WIDE PLENUM WILL BE SUPPLIED AS PER RACK CONFIGURATION.

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**Schneider Electric**

TITLE: SYMMETRA PX  
Input: 480V AC 3PH DUAL MAINS  
Output: 480V AC 3PH 500kW  
TOP ENTRY 2 MOD W/ LINE-UP MODULAR BATTERY  
UPS POWER FRAME INTERNAL VIEW

PROJECT: DRAWINGS SHEET 6 OF 13

DWG NO: SY250K500TG2C2-3W-LB

DRAWN BY: RAMESH B 12-APR-12

ENGINEER: M.LEPARD/A.WARNER 12-APR-12

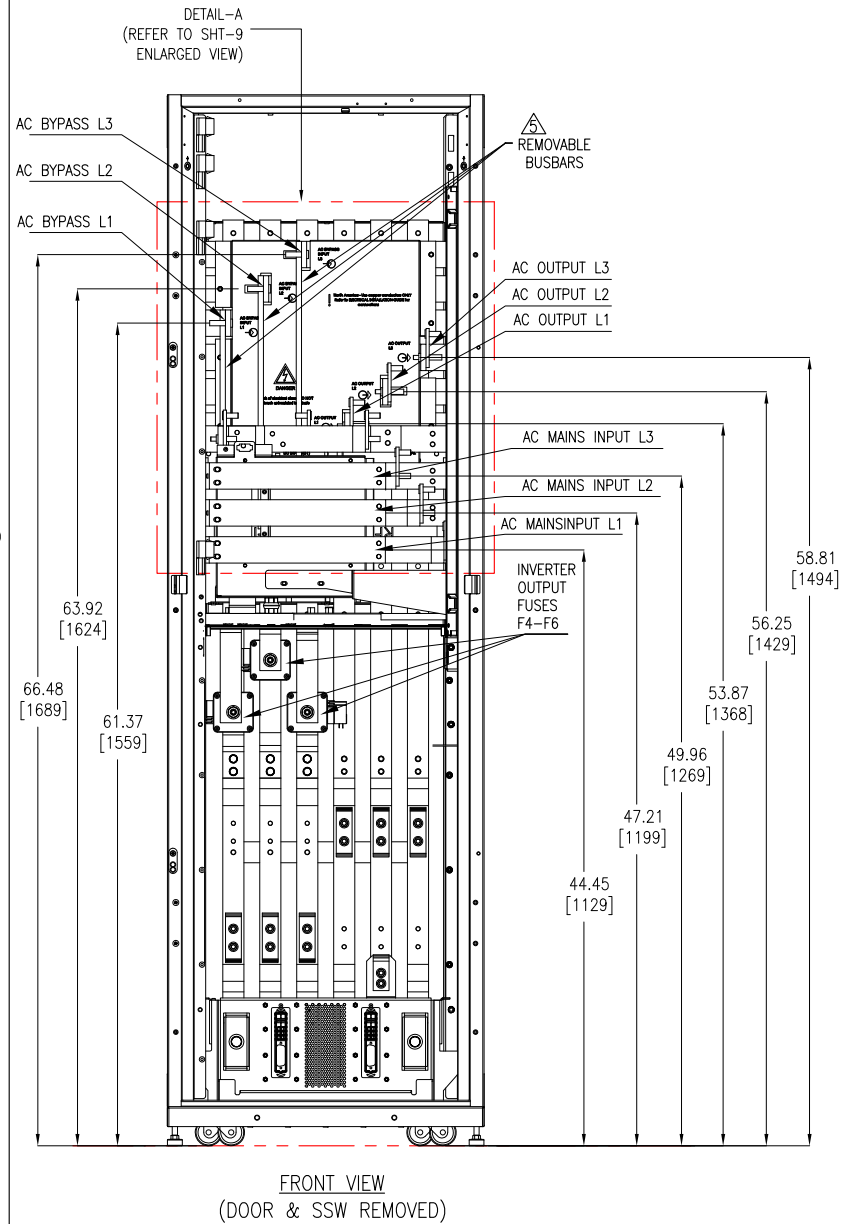
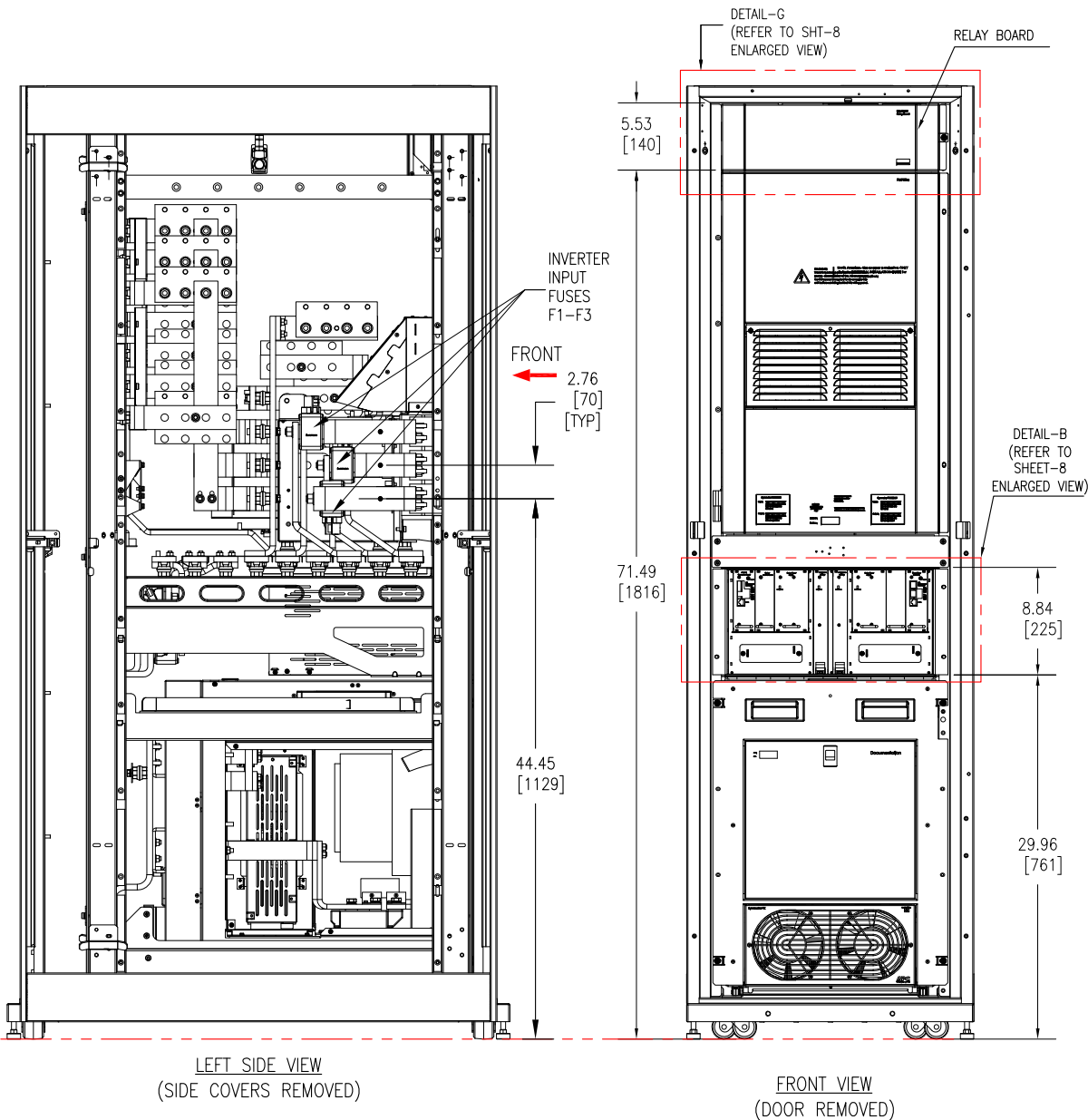
APPROVED BY: B.SHERIDAN/E.SILVA 12-APR-12

REV. 0

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. SOME STRUCTURAL DETAILS HAVE BEEN OMITTED FOR CLARITY.
- △5. BUSBAR SHALL BE REMOVED FOR DUAL MAINS CONFIGURATION.

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**Schneider Electric**

TITLE: SYMMETRA PX  
Input: 480V AC 3PH DUAL MAINS  
Output: 480V AC 3PH 500kW  
TOP ENTRY 2 MOD W/ LINE-UP MODULAR BATTERY  
UPS INPUT- OUTPUT FRAME INTERNAL VIEW

PROJECT: DRAWINGS SHEET 7 OF 13

DWG NO: SY250K500TG2C2-3W-LB

DRAWN BY: JAYAPRAKASH 03-FEB-15

ENGINEER: M.LEPARD/A.WARNER 03-FEB-15

APPROVED BY: B.SHERIDAN/E.SILVA 03-FEB-15

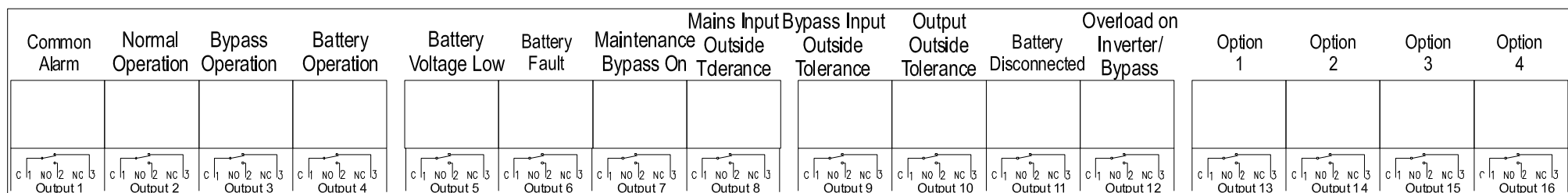
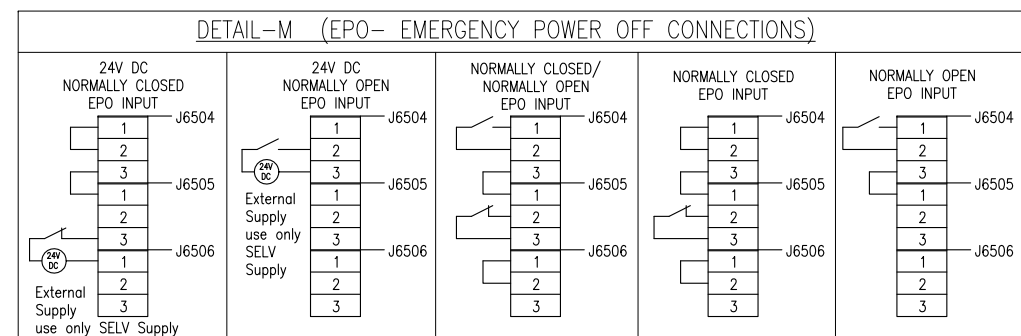
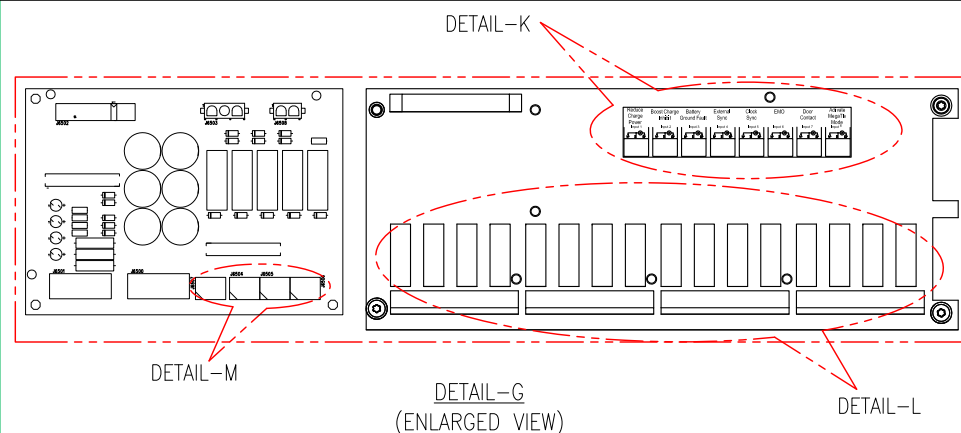
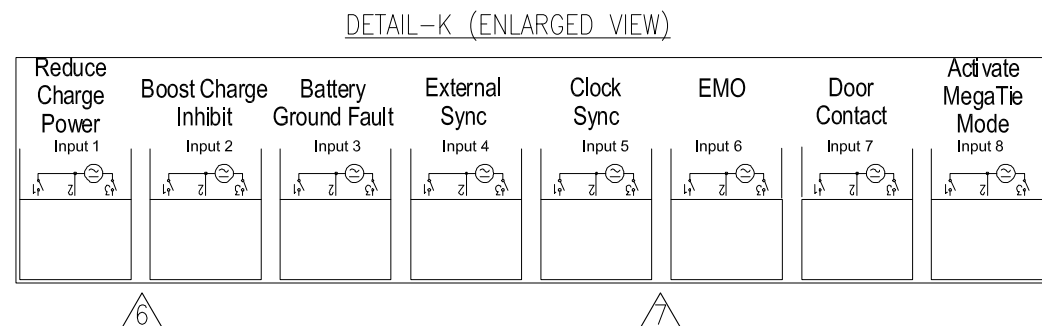
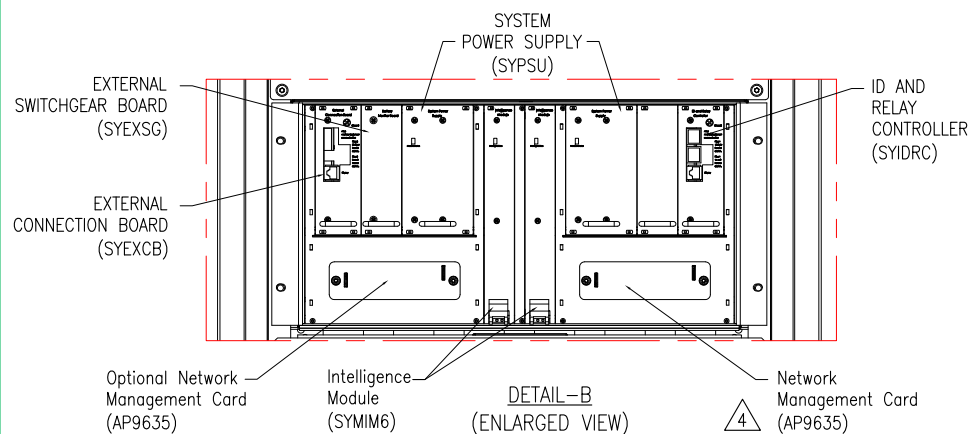
REV. 2

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. INPUT 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 DUAL MAINS  
Output: 480V AC 3PH 500kW  
TOP ENTRY 2 MOD W/ LINE-UP MODULAR BATTERY  
UPS INPUT- OUTPUT FRAME INTERNAL DETAILS

DWG NO: SY250K500TG2C2-3W-LB

DRAWN BY:	JAYAPRAKASH	05-FEB-16
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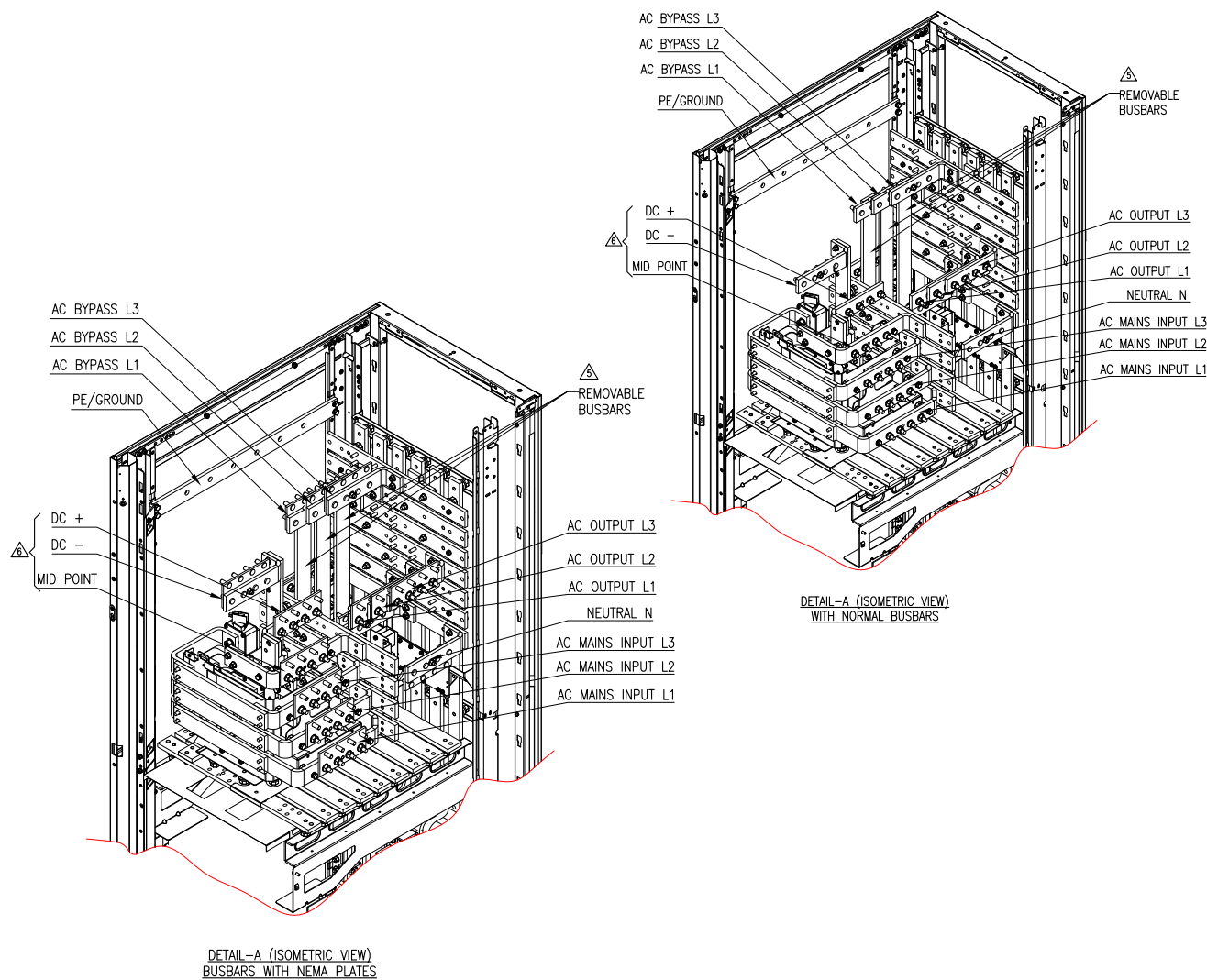
ENGINEER:	A.WARNER	05-FEB-16
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REV. 3

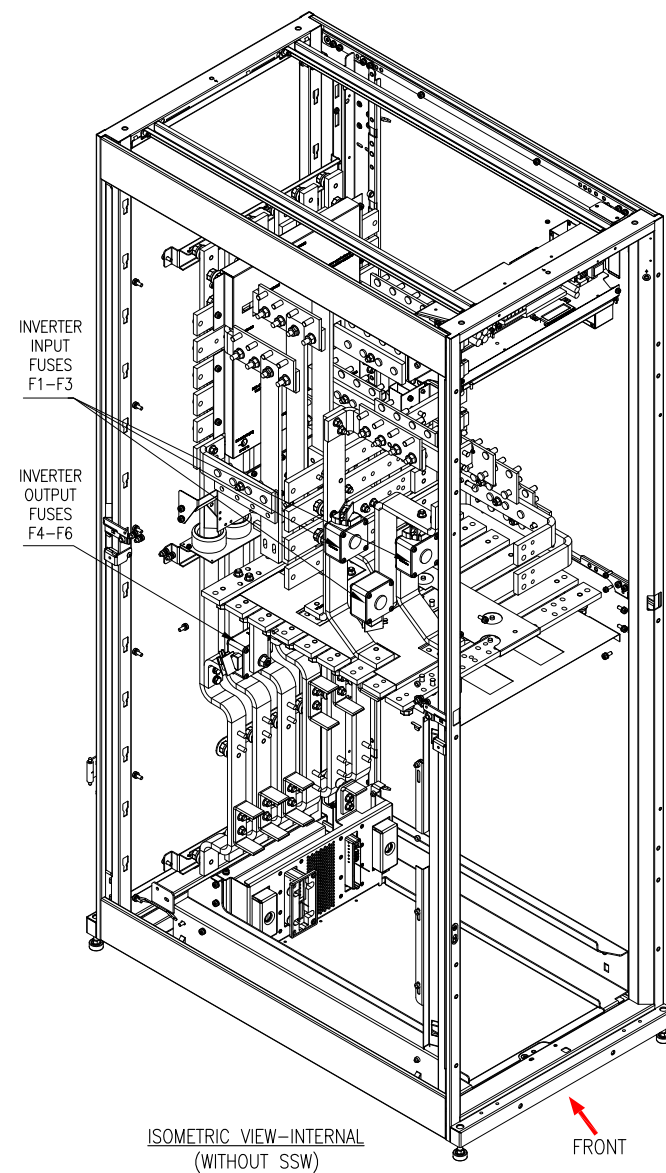
### THIRD

## ANGLE





DETAIL-A (ISOMETRIC VIEW)  
WITH NORMAL BUSBARS



#### 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. SOME STRUCTURAL DETAILS HAVE BEEN OMITTED FOR THE PURPOSE OF CLARITY.
4. ALL DIMENSIONS ARE IN INCHES[MILLIMETERS].
- △5. BUSBARS SHALL BE REMOVED FOR DUAL MAINS CONFIGURATION.
- △6. 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

TITLE: SYMMETRA PX  
Input: 480V AC 3PH DUAL MAINS  
Output: 480V AC 3PH 500kW  
TOP ENTRY 2 MOD W/ LINE-UP MODULAR BATTERY  
UPS INPUT- OUTPUT FRAME INTERNAL ISOMETRIC

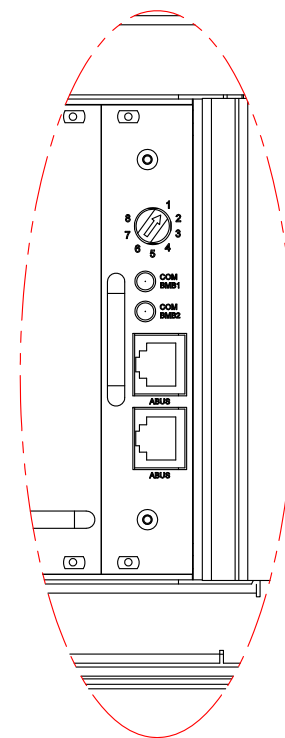
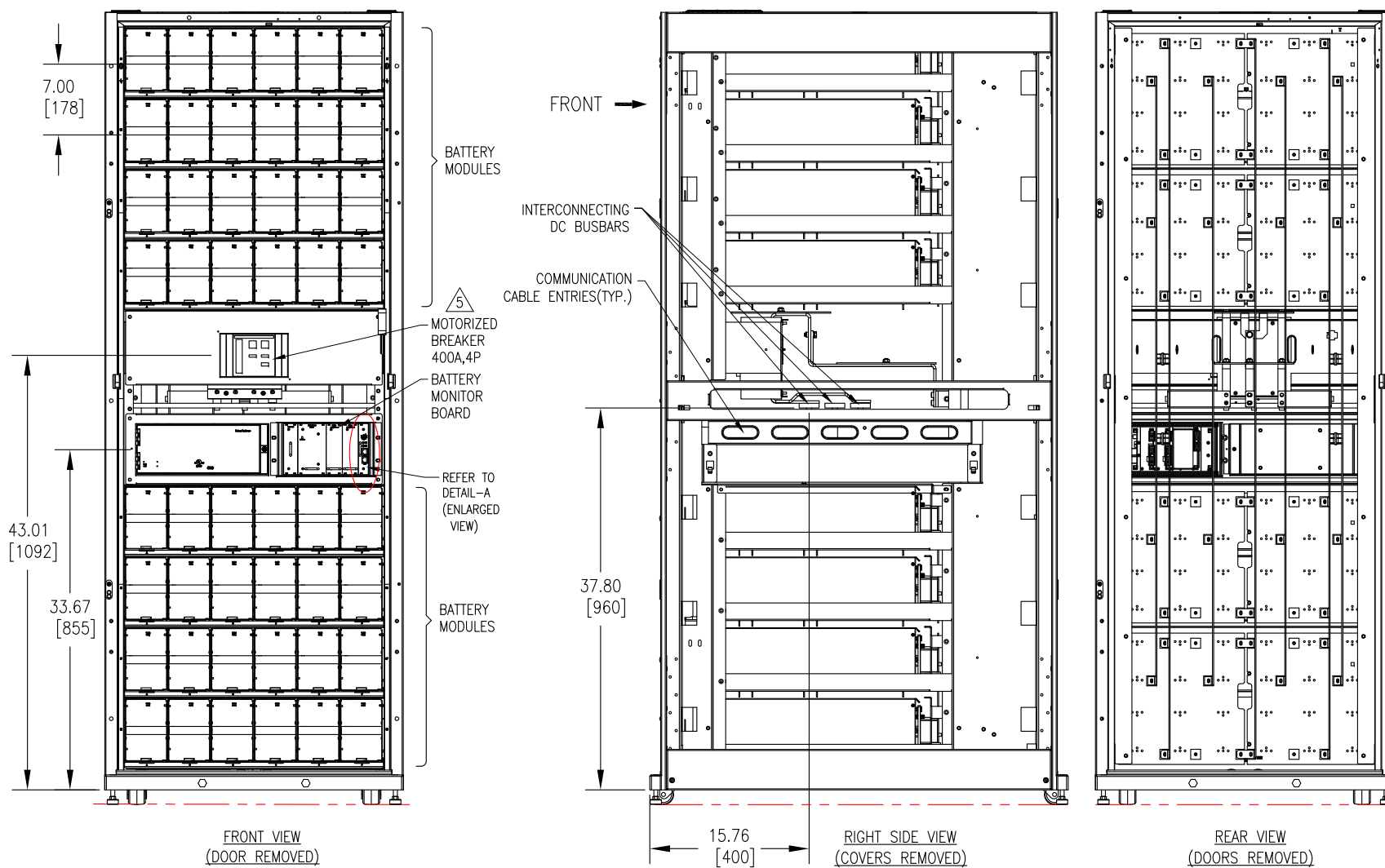
PROJECT: DRAWINGS SHEET 9 OF 13

DWG NO: SY250K500TG2C2-3W-LB

DRAWN BY: JAYAPRAKASH 03-FEB-15  
ENGINEER: M.LEPARD/A.WARNER 03-FEB-15

APPROVED BY: B.SHERIDAN/E.SILVA 03-FEB-15

REV. 1  
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 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 EPO/UPS 24V DC SIGNAL.

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**Schneider Electric**

TITLE: SYMMETRA PX  
Input: 480V AC 3PH DUAL MAINS  
Output: 480V AC 3PH 500kW  
TOP ENTRY 2 MOD W/ LINE-UP MODULAR BATTERY  
BATTERY FRAME INTERNAL VIEW

PROJECT: DRAWINGS SHEET 10 OF 13

DWG NO: SY250K500TG2C2-3W-LB

DRAWN BY: RAMESH B 12-APR-12

ENGINEER: M.LEPARD/A.WARNER 12-APR-12

APPROVED BY: B.SHERIDAN/E.SILVA 12-APR-12

REV: 0

THIRD

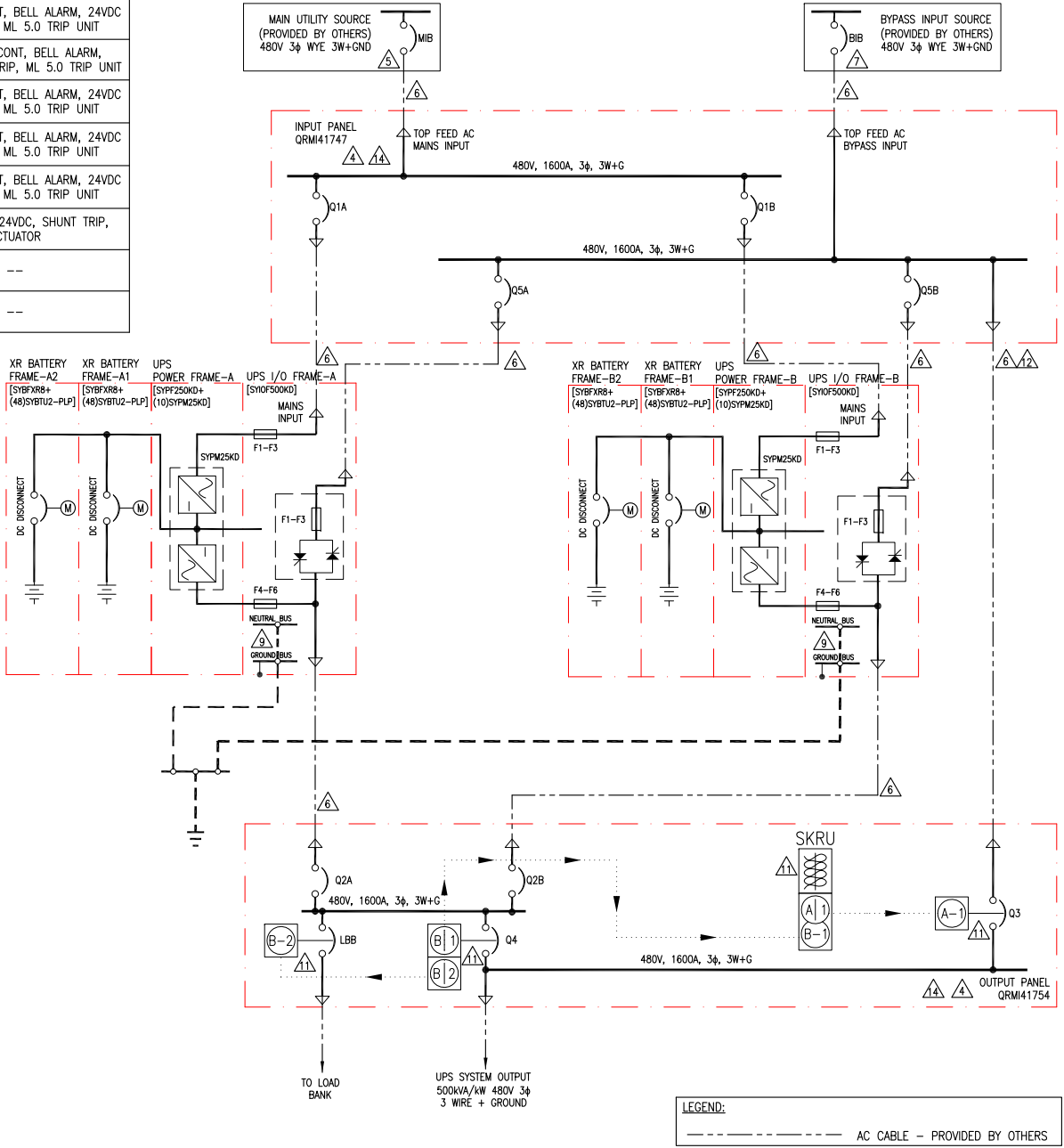
ANGLE

PROJECTION

DEVICE RATING					
DEVICE	RATING	TYPE	MAKE	MODEL	ACCESSORIES
Q1A, Q1B	800A, 600V 100% RATED	MCCB, 3 POLE	Schneider Electric	PJP36080CU33ACBCSKYP	3A/3B AUX. CONT, BELL ALARM, 24VDC SHUNT TRIP, ML 5.0 TRIP UNIT
Q2A, Q2B	700A, 600V 100% RATED	MCCB, 3 POLE	Schneider Electric	PJP36080CU33BACBCSKYP	3A/3B AUX. CONT, BELL ALARM, 24VDC SHUNT TRIP, ML 5.0 TRIP UNIT
Q3	1600A, 600V 100% RATED	ICCB, 3 POLE	Schneider Electric	WL1EEV33A9CXFXXXXA	8A/8B AUX. CONT, BELL ALARM, 120VAC SHUNT TRIP, ML 5.0 TRIP UNIT
Q4	1600A, 600V 100% RATED	ICCB, 3 POLE	Schneider Electric	WL1EEV33A9CXBXXXXA	8A/8B AUX. CONT, BELL ALARM, 24VDC SHUNT TRIP, ML 5.0 TRIP UNIT
Q5A, Q5B	700A, 600V 100% RATED	MCCB, 3 POLE	Schneider Electric	PJP36080CU33BCBCSKYP	3A/3B AUX. CONT, BELL ALARM, 24VDC SHUNT TRIP, ML 5.0 TRIP UNIT
LBB	1600A, 600V 100% RATED	ICCB, 3 POLE	Schneider Electric	WL1EEV33A9CXBXXXXA	8A/8B AUX. CONT, BELL ALARM, 24VDC SHUNT TRIP, ML 5.0 TRIP UNIT
DC DISCONNECT	400A, 600V DC	MCCB, 4 POLE	ABB	T5	1 AUX. CONT, 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 65kAIC, FOR UPS AND INPUT/OUTPUT PANELS.
- △ 5. AC MAIN UTILITY SOURCE SHALL BE 480VAC, 3 $\phi$ , SOLIDLY GROUND WYE, 3 WIRE+GROUND (CONTACT Schneider Electric IF OTHER). SEE SHEET 12 FOR SITE PLANNING SUBMITTAL DATA.
- △ 6. AC CABLING SHALL BE 600V RATED, 3 WIRE+GROUND.
- △ 7. AC BYPASS UTILITY SOURCE SHALL BE 480VAC, 3 $\phi$ , SOLIDLY GROUND WYE, 3 WIRE+GROUND (CONTACT Schneider Electric IF OTHER). SEE SHEET 12 FOR SITE PLANNING SUBMITTAL DATA.
8. CABLE LUGS ARE NOT PROVIDED.
- △ 9. THE NEUTRAL TO GROUND SYSTEM BONDING JUMPER PROVIDED BY Schneider Electric SHALL BE INSTALLED FOR 3 WIRE OUTPUT CONFIGURATION.  
PLACE A N-G BOND IN EACH UPS MODULE AND THEN CONNECT THE EQUIPMENT GROUND OF EACH UPS VIA TAP CONDUCTORS TO A COMMON GROUNDING ELECTRODE BUSBAR AND A SINGLE GROUNDING ELECTRODE CONDUCTOR. SEE NEC 250.30 (A)(4), INCLUDING EXCEPTION#1. L-N LOADING IS NOT PERMITTED. SEE INSTALLATION MANUAL FOR DETAILS.
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. KEY INTERLOCKS WITH SKRU, SCHEME 39, BETWEEN Q3 AND Q4, ARE OPTIONAL AND ARE NOT INCLUDED AS STANDARD WITH THE SYSTEM. (SCHEME 39 ADDER IS QCC67185)  
KEY INTERLOCKS WITH SKRU, SCHEME 29, BETWEEN LBB AND Q4, ARE OPTIONAL AND ARE NOT INCLUDED AS STANDARD WITH THE SYSTEM. (SCHEME 29 ADDER IS QCBA39274)  
LBB IS OPTIONAL AND IS NOT INCLUDED AS STANDARD WITH THE SYSTEM. (LBB ADDER IS QRM144243)  
INSTALLATION OF LBB AND KEY INTERLOCKS WITH SKRU IS STRONGLY RECOMMENDED.
- △ 12. CABLE SIZE AND INSTALLATION SHALL COMPLY WITH NEC ART. 240.21. IF NOT, USE CABLES RATED SAME AS THE MIB FEEDER.
13. CABLE LENGTHS FOR STATIC BYPASS INPUT AND OUTPUT SHALL BE SAME SUM TOTAL TO ENSURE CORRECT LOAD SHARING IN STATIC BYPASS OPERATION.
- △ 14. THIRD PARTY PRODUCT PROVIDED BY Schneider Electric. NOT PART OF THIS SOLUTION.



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**Schneider Electric**

TITLE: SYMMETRA PX  
Input: 480V AC 3PH DUAL MAINS  
Output: 480V AC 3PH 500kW  
TOP ENTRY 2 MOD W/ LINE-UP MODULAR BATTERY  
SYSTEM ONE LINE DIAGRAM

PROJECT: DRAWINGS SHEET 110F13

DWG NO: SY250K500TG2C2-3W-LB

DRAWN BY: BALA/S CUNHA 03-FEB-15

ENGINEER: D LOEWENSTEIN/P BOUCHER 03-FEB-15

APPROVED BY: B SHERIDAN/C FLY 03-FEB-15

REV. 2

ANGLE

PROJECTION:

N/A

Symmetra™ PX 250K UPS 2 Module Site Planning Data - Dual Feed w/o MBwD - 4 Wire																																	
UPS Rating				Voltage(VAC)		Mains AC Input - (MIB) <sup>1</sup>						Bypass AC Input - (BIB) (Q5) (Q3) <sup>2, 4</sup>						External Battery System <sup>3, 6</sup>				AC Output (Q2) <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</sup>				Nominal VDC	Battery kW	Current @ Nom. VDC(A)	Recommendations		Current(A)		Recommendations <sup>3</sup>				Typical Dimensions (HxWxD) [mm]	Inch	Average Weight Lbs [kg]	Floor Loading Lbs/R <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	78.4x47.3x42 [1991x1201x1067]		1808 [822]	131 [641]	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			1901 [864]	138 [674]	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			1993 [906]	144 [707]	21325
	7	175	175	480	480	242	261	300A	1x 300	350A	1x 350	210	263	225A	1x 4/0	300A	2x 1/0	2x 288	182	316	350A	1x 400	210	263	225A	1x 4/0	300A	1x 300			2086 [948]	151 [740]	24879
	8	200	200	480	480	277	298	300A	1x 350	350A	1x 500	241	301	250A	1x 250	350A	2x 2/0	2x 288	208	362	400A	1x 500	241	301	250A	1x 250	350A	1x 350			2178 [ 990]	158 [773]	28433
	9	225	225	480	480	312	335	350A	1 x 400	400A	2x 3/0	271	338	300A	2x 1/0	350A	2x 2/0	2x 288	234	407	450A	2x 4/0	271	338	300A	1x 300	350A	1x 500			2270 [ 1032]	165 [805]	31988
	10	250	250	480	480	346	372	400A	1x 500	450A	2x 4/0	301	376	350A	2x 2/0	400A	2x 3/0	2x 288	260	452	500A	2x 4/0	301	376	350A	1x 350	400A	1x 500			2363 [ 1074]	171 [838]	35542

Symmetra® PX 250K UPS 2 Module SWBD Site Planning Data <sup>13</sup>																		
UPS System Rating				Voltage(VAC)		Mains AC Input Single or Dual Feed (MIB) <sup>1</sup>				Bypass AC Input - Dual Feed (BIB - Q3) <sup>2</sup>				AC Output (Q4-LBB) <sup>2</sup>				Heat Rejection Battery Fully Charged BTU/HR
UPS Frame Rating	QTY in parallel	kVA	kW			Input <sup>1</sup>	Output <sup>2</sup>	Current(A)		Recommendations <sup>3</sup>		Current(A)		Recommendations <sup>3</sup>		Current(A)		
				Full Load	Max. <sup>7</sup>			100% OCPD	100% Cable	NOM	Max. <sup>8</sup>	100% OCPD	100% Cable	NOM	Max. <sup>8</sup>	100% OCPD	100% Cable	
250kVA 250kW	2	500	500	480	480	693	745	800A	2x 500	601	752	700A	2x 350	601	752	700A	2x 350	71,083

Symmetra™ PX

Notes.

1. Mains Input source must be 480V Wye 3-wire+ Ground. Contact Schneider Electric if other.
2. Output is 480V Wye 4-wire + Ground. The bypass source must match the output configuration .
3. Recommended cables are AWG16cmil minimum requirement for three (3) current carrying conductors in raceway, sized for 30<sup>1</sup> C environment and 75<sup>2</sup> C terminations.  
All cabling must comply with installation site conditions and any applicable Local and/or National Codes.
4. Dual Feed static bypass input feeder is limited to maximum size of 250kcmil conductor.
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 DCDs 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 10minutes. Actual short time performance may be limited by the over current 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 1watt= 3.412 BTU/HR.
12. OCPD = Over Current Protective Device.
13. Common battery system is not allowed or supported for this product.
14. All wirings to be in accordance with all applicable national and/or local electrical codes.
15. Control wiring and power wiring must be run in separate conduit.
16. Input: THDI < 5% at full load.
17. Output: THDU < 2% Linear Load, < 3% Non Linear Load.
18. Ratings of the cables and over current devices supplied for information only. User to consult with their engineering services before adopting.
19. For back-to-back UPS installations, the Plexiglass French Door Kit (0H-0242) must be installed at the rear of each Power frame and I/O frame to ensure proper air flow. 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 DUAL MAINS  
Output: 480V AC 3PH 500kW  
TOP ENTRY 2 MOD W/ LINE-UP MODULAR BATTERY  
SITE PLANNING DATA

PROJECT: DRAWINGS

SHEET 12 OF 13

DWG NO: SY250K500TG2C2-3W-LB

DRAWN BY: RAMESH B

ENGINEER: M.LEPARD/A.WARNER

APPROVED BY: B.SHERIDAN/E.SILVA

REV. 0

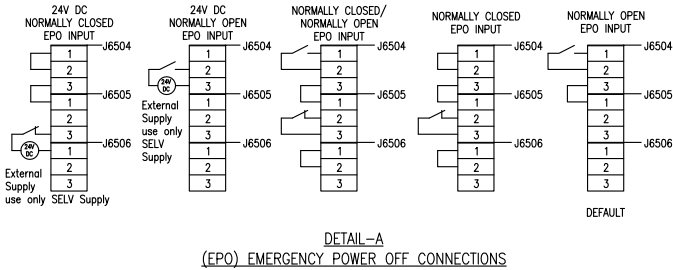
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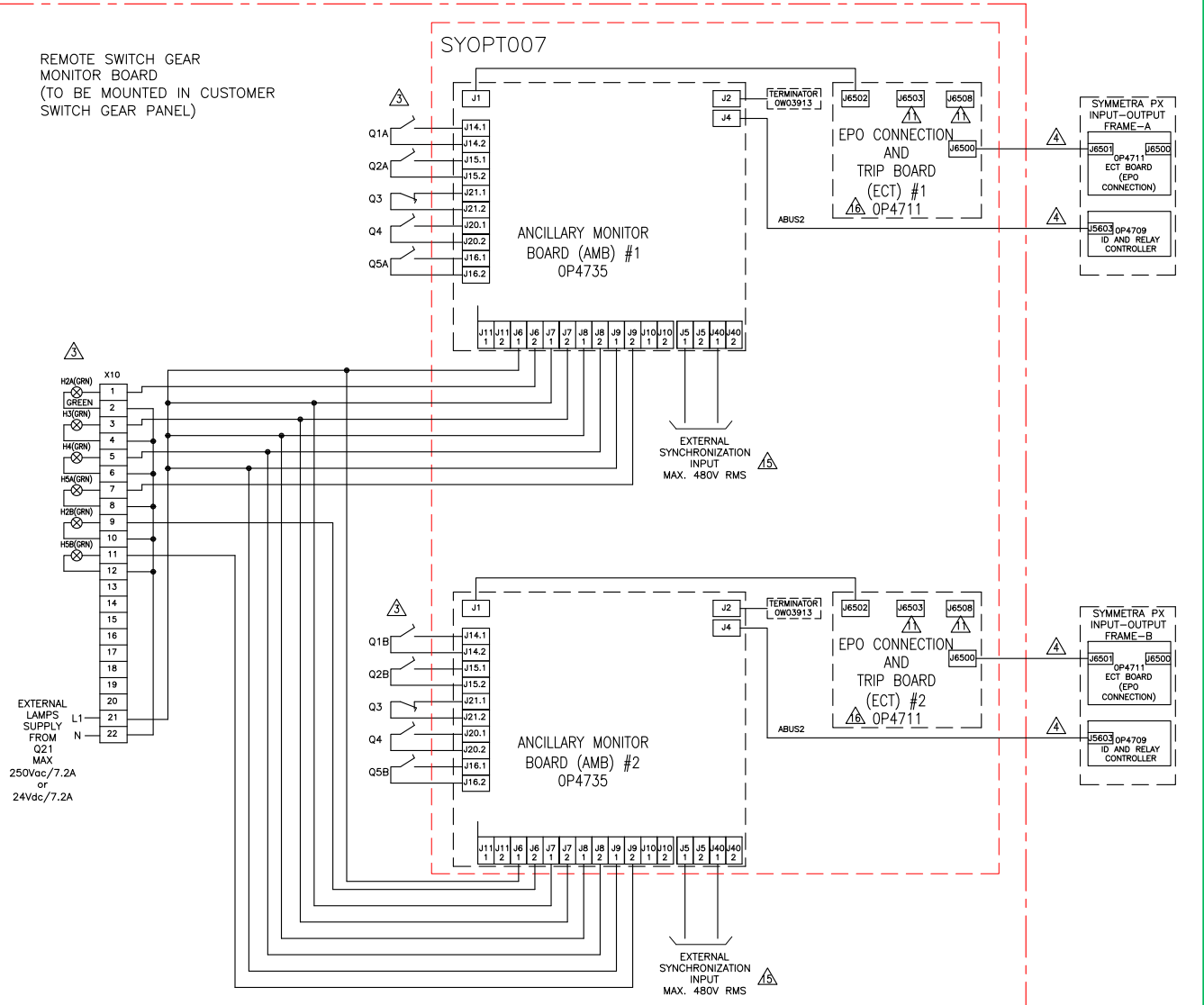
ANGLE PROJECTION

N/A



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 0W03913 IN THE J2 TERMINAL ON THE AMB.
6. ON EACH SYOPT007, CONNECT THE "ABUS" CABLE(0W3785C) 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(0W3759A) 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)



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**Schneider Electric**

TITLE: SYMMETRA PX  
Input: 480V AC 3PH DUAL MAINS  
Output: 480V AC 3PH 500kW  
TOP ENTRY 2 MOD W/ LINE-UP MODULAR BATTERY  
SYSTEM WIRING DIAGRAM

PROJECT: DRAWINGS SHEET 13 OF 13

DWG NO: SY250K500TG2C2-3W-LB

DRAWN BY: BALAMURUGAN 26-FEB-16

ENGINEER: M LEPARD 26-FEB-16

APPROVED BY: N BOBBIT 26-FEB-16

REV. 2

ANGLE

PROJECTION

N/A