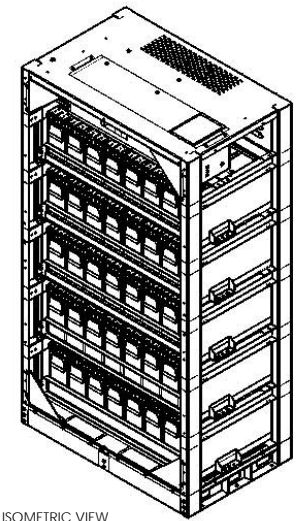
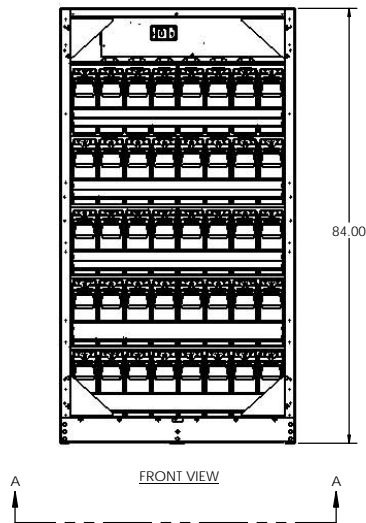


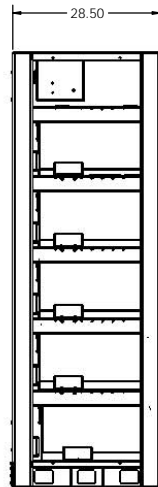
SECTION A-A



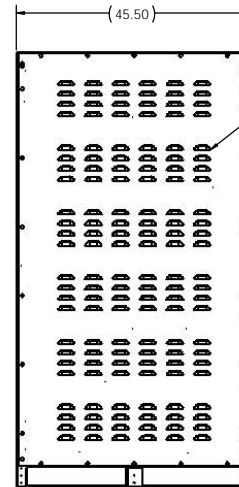
ISOMETRIC VIEW



FRONT VIEW



SIDE VIEW



REAR VIEW

VENTILATION LOUVERS

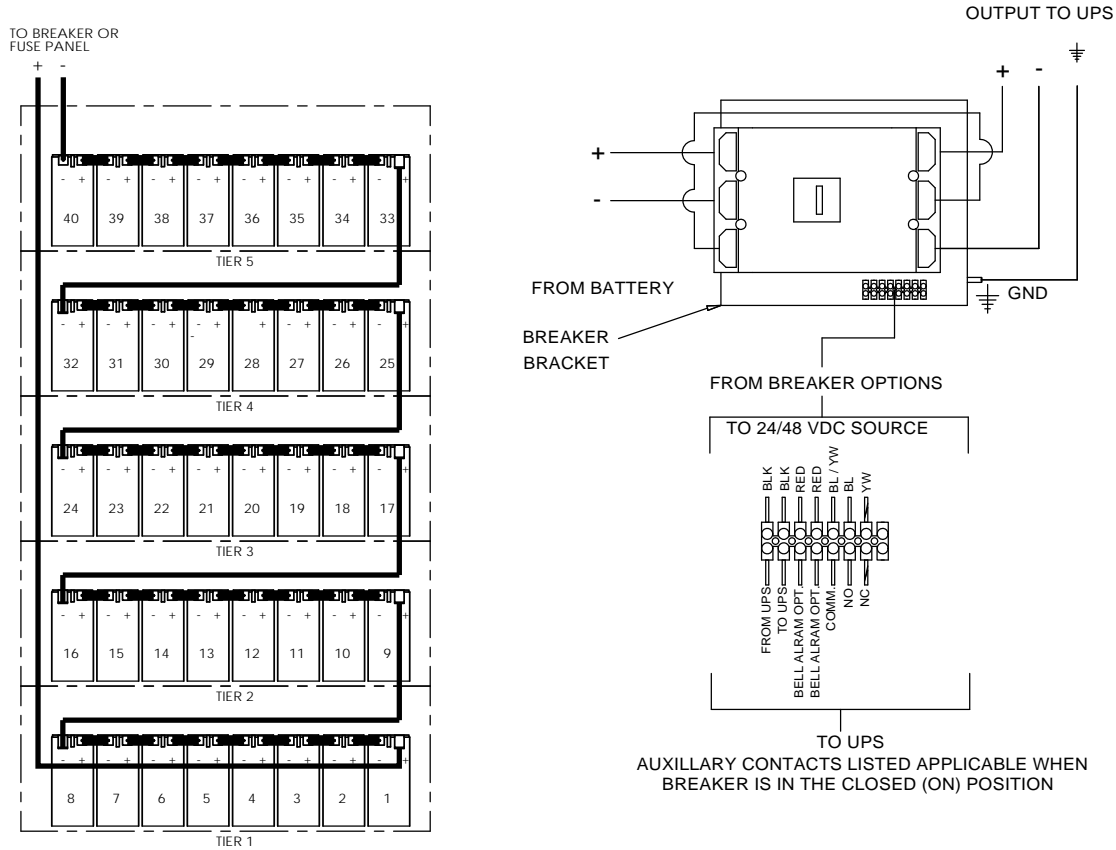
RACK NOTES:

1. EMPTY RACK WEIGHT: 668 LBS.
2. FULLY WELDED FRAME. MANUFACTURED FROM HEAVY GAUGE STEEL.
3. ALL BATTERY TERMINALS HAVE POLYCARBONATE COVER.
4. OPTIONAL WALL MOUNTED BREAKER ENCLOSURES ARE AVAILABLE.
5. POWDER COATED WITH A CORROSION RESISTANT POWDER USING A FIVE STAGE EMERSION PRETREATMENT PROCESS.
6. BATTERIES CAN BE ACCESSED FROM FRONT, REAR, AND BOTH SIDES.
7. CUSTOM DESIGNED PALLETS FOR SHIPPING ANYWHERE LOCALLY AND GLOBALLY (UPON REQUEST).
8. BATTERY RACK CAN BE MOVED WITH A NORMAL PALLET JACK FROM FRONT AND REAR.
9. STANDARD AND CUSTOM SPILL CONTAINMENT OPTIONS ARE AVAILABLE.

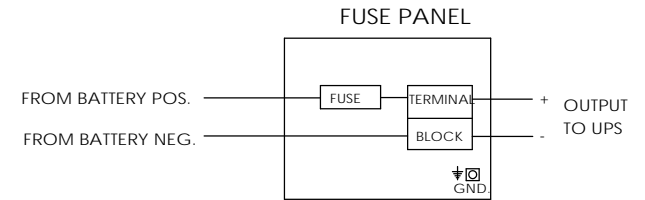
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TITLE: BATTERY RACK, 12V, 480V					
PROJECTION:	NAME:	DATE:	SIZE:	DWG. NO.:	REV:
DRAWN BY: RNA		3-5-13	D	EFR52-SPEC	B
SCALE: 1:12				SHEET 1 OF 3	

BREAKER DETAIL



FUSE OPTION



BATTERY CONFIGURATION TABLE						
BATTERY MODEL NUMBER	BATTERY MANUFACTURER					MAXIMUM NUMBER OF BATTERIES PER CABINET
	ENERSYS	EAST PENN	C & D	NORTHSTAR	GNB/EXIDE	
12XE1150F-FR	12XE1010F-FR	HR3500ET	UPS 12-355MFR	12-450RT	M12V 155FT	40
	12XE1110F-FR		UPS12-410MRFX	12-650RT	M12V 180FT	
		HR5500ET	UPS 12-615MRF		S12V645FT	
			UPS 12-700MRF	12-730RT	S12V735FT	
			UPS12-1000MRFX			

ELECTRICAL NOTES:

1. ALL CABLES ARE UL LISTED.
2. ALL BREAKERS ARE UL RECOGNIZED.
3. ALL FUSES ARE UL RECOGNIZED, TYPE A50P, A70P OR EQUIVALENT. ALWAYS REPLACE WITH SAME TYPE OR ITS EQUIVALENT.
4. TERMINAL BLOCKS ARE UL RECOGNIZED, 600V RATED.
5. RACKS ARE SHIPPED WITH THE BREAKER IN THE TRIPPED POSITION.
6. RACK GROUND CONNECTION IS A 5/16-18 THREADED STUD.
7. CABLES BETWEEN BATTERY RACKS TO UNINTERRUPTIBLE POWER SUPPLY ARE OPTIONAL.

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TITLE: BATTERY RACK, 12V, 480V			
PROJECTION:	DATE: 3-5-13	SIZE: D	REV: B
DRAWN BY: RNA	DWG. NO: EFR52-SPEC	SCALE: 1:12	SHEET 2 OF 3

ESS FRONT TERMINAL RACK SYSTEM MATRIX											
ESS EFR52 RACK SYSTEM PART NUMBERS											
E F R 5 2 A A 40 550ET B 04 A											
DIGIT 1	DIGIT 2	DIGIT 3	DIGIT 4	DIGIT 5	DIGIT 6	DIGIT 7	DIGIT 8-9	DIGIT 10-14	DIGIT 15	DIGIT 16-17	DIGIT 18
	CABINET MODEL										
	TYPE OF BATTERY	TYPE OF CABINET OR RACK	NUMBER OF TIERS	BATTERY TYPE	COLOR	HEIGHT (INCHES)	BATTERY QUANTITY	BATTERY MODEL PER MANUFACTURER	BREAKER OR FUSE	AMPS	BREAKER OPTION
E = ESS STANDARD	F = FRONT TERMINAL	R = RACK	5 = 5 TIER OF BATTERIES	2 = 12V FT (NORMAL)	**A = BLACK	**A = 84	40	ENERSYS	B = BREAKER	04 = 600 AMPS	A = 24 VDC SHUNT TRIP, AUX CONTACT
C = CENTER TAP CABLING					B = BEIGE		36	XE101 - 12XE1010F-FR		05 = 500 AMPS	B = 48 VDC SHUNT TRIP, AUX CONTACT
S = SPLIT BUS CABLING					C = LIEBERT GRAY		32	XE111 - 12XE1110F-FR		06 = 450 AMPS	C = 24 VDC UVR, AUX CONTACT
					D = MITSUBISHI BEIGE		30	XE115 - 12XE1150F-FR		07 = 400 AMPS	D = 48 VDC UVR, AUX CONTACT
					E = MGE WHITE		24	EAST PENN		08 = 350 AMPS	E = 120 VDC SHUNT TRIP, AUX CONTACT
					F = TOSHIBA BLACK			350ET - HR3500ET		09 = 300 AMPS	F = 240 VDC SHUNT TRIP, AUX CONTACT
					G = GE WHITE			550ET - HR5500ET		10 = 250 AMPS	G = 120 VDC UVR, AUX CONTACT
					H = LIEBERT BLACK			C & D		11 = 225 AMPS	H = 240 VDC UVR, AUX CONTACT
					I = EATON BLACK			355MR - UPS12-355MRF		12 = 200 AMPS	J = 24VDC UVR W/BELL ALARM
					J = LIGHT GRAY			615MR - UPS12-615MRF		13 = 175 AMPS	K = BELL ALARM
								700MR - UPS12-700MRF		14 = 150 AMPS	
								41MRX - UPS12-410MRXF		15 = 125 AMPS	
								1KMRX - UPS12-1000MRXF		16 = 100 AMPS	
								NORTHSTAR		17 = 75 AMPS	
								450RT - 12-450RT		18 = 50 AMPS	
								650RT - 12-650RT		19 = 40 AMPS	
								730RT - 12-730RT		20 = 30 AMPS	
								GNB/EXIDE			
								M12V155FT			
								M12V180FT			
								S12V645FT			
								S12V735FT			



PART NUMBER GUIDE:

1. REFERENCE THE BATTERY PART NUMBER GUIDE TABLE WHEN ORDERING A RACK.
 2. WHEN PLACING ORDER, INDICATE THE QTY OF RACKS. NO DASHES ARE TO BE INCLUDED IN PART NUMBER. OVERALL PART NUMBER OF SYTEM IS ALWAYS 18 DIGITS LONG.
 3. THE BASE NUMBER (DIGITS 1-5) WILL ALWAYS BE THE SAME.
 4. DIGITS 6-7 WILL FOLLOW THE BASE NUMBER INDICATING THE COLOR AND HEIGHT OF THE RACK.
 5. DIGITS 8-18 MAKE UP THE REST OF THE SYSTEM PART NUMBER WHICH INCLUDE OPTIONS FOR BATTERY QUANTITIES, BATTERY MODEL AND BREAKER OPTIONS.
 6. EXAMPLE: **EFR52AA** - THIS REPRESENTS A STANDARD **EFR52** RACK, WITH A POWDER COAT FINISH OF STANDARD BLACK AND 84.00" HEIGHT.
- PLEASE NOTE, ONLY STANDARD RACKS (COLOR AND HEIGHT) ARE IN STOCK. MINIMUM ORDERS OF 20 OR MORE RACKS ARE REQUIRED FOR NON STANDARD RACKS UNLESS IT IS THROUGH OEM CONTRACTS.

**REPRESENTS STANDARD COLOR FOR ALL ESS RACKS (DIGIT 6)

**REPRESENTS ESS STANDARD HEIGHT OF TOP TERMINAL BATTERY RACKS (DIGIT 7) ONLY HEIGHT AVAILABLE FOR THIS RACK

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