Project: UPS System To Backup Elevator System In The Building Located At _____ Las Vegas, Nevada 89144

Subject: **UPS and External Battery Pack Sizing Calculations**

Section 1. UPS Sizing Calculation

According to the elevator submittal package, the upper left corner shows the power consumption data. The UPS is to only supply power to the elevator and the exhaust fan.

CONTRACT	GROUP	ELEVATOR	PRODUCT	DUTY	SPEED	Elevator Running Full Load Up*		HP
						CURRENT RATING**	ACCELERATING CURRENT	
	9 stop 3520	3520	G3E	3500	200	44	55	15

* REFER TO ANSI/NFPA 70, SECTION 620-13 ** For Code Versions Prior to 1996 Refer to Section 620-14

Elevator's Starting Inrush Power: 55A * 208V * 1.732 = 19,814.08 VA

Exhaust Fan Typical Specifications: 1P 120V 1/2HP
Exhaust Fan Estimated Load:
Full Load Current: 120V 10A
Starting Inrush Current: 120V 65A
Exhaust Fan Starting Power requirement: 65A * 120V = 7.8 KVA

CONTRACT	GROUP	ELEVATOR	FULL LOAD DOWN			
			RUNNING		STOPPING	
			amps	kW	amps	kW
	9 stop 3520	3520	34	10	37	11

Load Bank Requirement: 11 KVA

Elevator And Exhaust Fan Combined Startup Load: 19.8 KVA + 7.8 KVA + 11 KVA = 38.6 KVA Minimum Recommended UPS: 40KVA/40KW 3 Phase 208/120V 60Hz On-Line Double Conversion UPS

Section 2. Battery Sizing Calculation (Backup Time Calculation)

-The UPS Battery Bus Voltage Is: 240 Volts DC (12 Volts X 20 Batteries) X 2 Strings (40 Batteries Total)
-Each Battery String Consists Of 20 Individual 12 Volt DC Batteries Connected In Series
-The Elevator's Accelerating Consumption (Non-Continuous) Is 55 Amps
-The Elevator's Running Consumption (Non-Continuous) 44 Amps
-The Elevator's Normal (Average) Projected Operating Current Is 44 Amps
-The Operating Power Capacity Requirement Is: 44A * 208V * 1.732 = 15.9 KVA
-The Operating Power Capacity Requirement For The Machine Room Exhaust Fan Is: 1 Phase, 120 Volts AC, 60Hz, ½ HP, Estimated At: 1.2KVA
-Total Average Load is 15.9KVA + 1.2KVA = 17.1KVA
-The UPS Output Power Factory is: 1.0
-The Battery Mode Inverter Efficiency Of The 40KVA UPS Is Approximately 93.5%

EFFICIENCY	
AC Mode	94%
ECO Mode	97%
Battery Mode	93.5%

*This Project Will Use 40 Individual 12 Volt DC 100 Amp Hour Hitachi Chemical Energy Technology CSB Batteries (CSB Model# GPL121000)

-Battery Cut Off Voltage: 10.5 Volts DC
-Cells Per Battery: 6
-Cell Cut Off Voltage: 1.75 Volts DC

Using The Cut Off Voltage Of 1.75 Volts Per Cell, The Constant Wattage Discharge Is **475W** for 120 Minutes (2 Hours) (See CSB Model# GPL121000 For Verification)

Each external battery cabinet has 40 CSB GPL121000 batteries (please see below spec sheet).

Since this system will have 1 external battery cabinet, it will have a total of 40 CSB GPL121000 batteries.

Each battery has 1.15 gallons of electrolyte (see below electrolyte and weight list), so each battery cabinet will have 46 gallons of electrolyte, and the system will have 46 gallons of electrolyte.

http://www.csb-battery.com/english/01_product/00_overview.php

Hitachi Chemical HITACHI

Hitachi Chemical Energy Technology (Americas) Co., Ltd.
4008 Clay Avenue, Suite 210, Haltom City, TX 76117, U.S.A
Tel +1-817-244-7777 / 1-(800)3-CSB-USA(272872)
Fax +1-817-244-4446
URL:http://www.hitachi-chem-en.com/

CSB Battery Type	Battery Weight		Electrolyte Weight		Electrolyte Volume		H2SO4 Weight		Lead Weight	
	(kg)	(lbs)	(kg)	(lbs)	(ml)	(gal)	(kg)	(lbs)	(kg)	(lbs)
EVH12150	4.60	10.14	0.82	1.80	606.00	0.16	0.37	0.81	3.45	7.61
EVH12240	7.55	16.65	1.44	3.18	1068.00	0.29	0.65	1.43	5.66	12.49
EVH12390	11.50	25.36	2.26	4.98	1674.00	0.45	1.02	2.24	8.63	19.02
EVX1272	2.55	5.62	0.48	1.06	366.00	0.10	0.19	0.43	1.91	4.22
EVX12120	3.83	8.45	0.75	1.66	576.00	0.15	0.31	0.67	2.87	6.33
EVX12170	5.67	12.50	1.20	2.65	918.00	0.25	0.49	1.08	4.25	9.38
EVX12200	6.70	14.77	1.16	2.55	882.00	0.24	0.47	1.03	5.03	11.08
EVX12260	8.65	19.07	1.87	4.12	1428.00	0.38	0.76	1.67	6.49	14.30
EVX12300	10.40	22.93	1.82	4.02	1392.00	0.37	0.74	1.63	7.80	17.20
EVX12340	10.77	23.75	2.17	4.78	1656.00	0.44	0.88	1.94	8.08	17.81
EVX12400	13.20	29.11	2.78	6.14	2124.00	0.57	1.13	2.49	9.90	21.83
EVX12520	18.30	40.35	3.51	7.73	2676.00	0.72	1.42	3.14	13.73	30.26
EVX12650	22.20	48.95	4.40	9.71	3360.00	0.90	1.79	3.94	16.65	36.71
EVX12750	25.60	56.45	4.72	10.40	3600.00	0.97	1.91	4.22	19.20	42.34
GP645	0.84	1.85	0.15	0.34	116.10	0.03	0.07	0.15	0.63	1.39
GP672	1.22	2.68	0.24	0.54	183.00	0.05	0.11	0.23	0.91	2.01
GP6120	1.85	4.08	0.38	0.85	288.00	0.08	0.17	0.37	1.39	3.06
GP1245	1.66	3.66	0.31	0.68	232.20	0.06	0.13	0.30	1.25	2.75
GP1272	2.40	5.29	0.50	1.11	378.00	0.10	0.22	0.48	1.80	3.97
GP1245(12V 16W)	1.34	2.95	0.22	0.48	162.00	0.04	0.09	0.21	1.01	2.22
GP1272(12V 28W)	2.10	4.63	0.37	0.82	279.00	0.07	0.16	0.36	1.58	3.47
GP1272-F2	2.40	5.29	0.53	1.18	399.60	0.11	0.23	0.51	1.80	3.97
GP12120	3.67	8.09	0.79	1.73	588.60	0.16	0.34	0.75	2.75	6.07
GP12170	5.50	12.13	1.23	2.70	918.00	0.25	0.53	1.17	4.13	9.10
GP12200	6.40	14.11	1.18	2.60	882.00	0.24	0.51	1.13	4.80	10.58
GP12260	8.45	18.63	1.91	4.20	1428.00	0.38	0.83	1.82	6.34	13.97
GP12340	10.48	23.11	2.21	4.87	1656.00	0.44	0.96	2.11	7.86	17.33
GP12400	12.63	27.85	2.76	6.08	2064.00	0.55	1.19	2.63	9.47	20.89
GP12650	20.00	44.10	3.92	8.65	3111.68	0.84	1.80	3.75	15.00	33.08
GP121000	30.60	67.47	5.01	11.06	3979.32	1.07	2.30	4.79	22.95	50.60
GPL672	1.37	3.02	0.22	0.49	168.00	0.05	0.09	0.20	1.03	2.27
GPL1272	2.60	5.73	0.44	0.97	336.00	0.09	0.18	0.39	1.95	4.30
GPL12120	4.10	9.04	0.68	1.51	522.00	0.14	0.28	0.61	3.08	6.78
GPL12260	8.30	18.30	1.87	4.12	1428.00	0.38	0.76	1.67	6.23	13.73
GPL12400-KTP	14.50	31.97	2.53	5.58	1932.00	0.52	1.03	2.26	10.88	23.98
GPL12520	17.20	37.93	3.45	7.61	2634.00	0.71	1.40	3.09	12.90	28.44
GPL12750	25.60	56.45	4.24	9.35	3363.96	0.90	1.79	3.79	19.20	42.34
GPL12880	29.70	65.49	5.09	11.22	4036.75	1.08	2.14	4.55	22.28	49.12
GPL121000	33.50	73.87	5.39	11.89	4279.16	1.15	2.27	4.82	25.13	55.40
HR1218W	1.53	3.37	0.25	0.54	184.20	0.05	0.11	0.24	1.15	2.53
HR1221W	1.80	3.97	0.31	0.69	234.00	0.06	0.14	0.30	1.35	2.98
HR1224W	1.95	4.30	0.34	0.75	254.40	0.07	0.15	0.32	1.46	3.22
HR1227W	1.97	4.34	0.36	0.78	266.40	0.07	0.15	0.34	1.48	3.26
HR1234W	2.50	5.51	0.44	0.98	333.00	0.09	0.19	0.43	1.88	4.13
HR1251W	3.85	8.49	0.77	1.70	576.00	0.15	0.33	0.74	2.89	6.37
HR1290W	6.80	14.99	1.25	2.76	936.00	0.25	0.54	1.19	5.10	11.25
HR12120W	10.20	22.49	1.86	4.10	1392.00	0.37	0.81	1.78	7.65	16.87

Powered by CSB BATTERY ®

GPL series

GPL 121000 *12V 100AH*

Valve Regulated Lead Acid Battery

Maintenance-Free Sealed Lead Acid Battery.
Absorbent Glass Mat (AGM) technology for efficient gas recombination of up to 99%.

Design for Standby Power Applications

【Design Life】
Up to 10 Years in Standby Service at 25℃
Eurobat (20℃) : 10-12 years, Long Life

【 Operating Temperature Range】
Nominal Operating Temperature : 25℃(77℉)
Discharge : -15℃ ~ 50℃ (5℉~122℉)
Charge: -15℃ ~ 40℃ (5℉~104℉)
Storage: -15℃ ~ 40℃ (5℉~104℉)

【 Float Charging Voltage】
13.5 ~ 13.8 VDC/Unit at 25℃ (77℉)

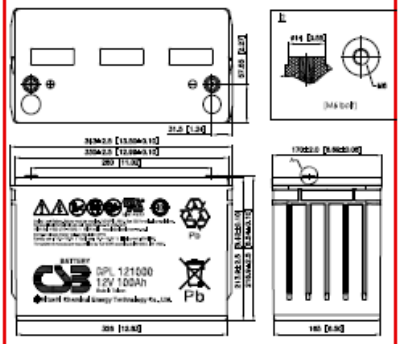
【Equalization Charging Voltage 】
14.4 ~ 15.0 VDC/Unit at 25℃ (77℉)

【 Self Discharge】
Less than 10% after 90 days, can be stored up to 6 months at 25℃ (77℉); Fully recharging is required before usage, and charged sooner if stored at higher temperature than 25℃ (77℉).

Specification

Design according with IEC 60896-21/22: 2004

Nominal Voltage	12V (6 cells per unit)		
Nominal Capacity	100 Ah @20hr-rate to 1.75V per cell @25℃ (77℉)		
Weight	Approx. 33.50 Kg (73.83 lbs)		
Maximum Discharge Current	800A (5sec)		
Internal Resistance	Approx. 3.2mΩ		
Short Circuit Current	2606A		
Maximum Charge Current	30.00A		
Terminal type	I2 thread lead alloy terminal to accept M6 bolt		
Terminal hardware Torque	138.6 Kgf-cm/ 120.3 lbf-in/ 13.58 N-m		
Container Material	PP (UL 94-HB) & Flame Retardant (94-V0) available upon request		
Dimensions	Length (L)	343.0±2.5 mm	13.50±0.10 inch
	Width (W)	170.0±2.0 mm	6.69±0.08 inch
	Container Height (h)	213.9±2.5 mm	8.42±0.10 inch
	Overall Height (H)	216.9±2.5 mm	8.54±0.10 inch



Constant Current Discharge Characteristics Unit: A (25℃, 77℉)

F.V/Time	5MIN	10MIN	15MIN	30MIN	60MIN	90MIN	2HR	3HR	5HR	8HR	10HR	20HR
1.60V	423	277	212	127	73.0	52.1	41.1	29.1	18.9	12.2	10.0	5.27
1.67V	375	266	207	125	72.4	51.7	40.7	29.0	18.8	12.1	9.93	5.22
1.70V	355	258	203	124	71.8	51.4	40.6	28.7	18.6	12.0	9.88	5.20
1.75V	317	240	194	120	71.1	50.9	40.2	28.6	18.5	11.9	9.81	5.19
1.80V	283	219	183	115	68.9	49.6	39.3	27.9	18.2	11.8	9.66	5.09
1.85V	245	196	164	106	65.2	47.2	37.6	26.8	17.4	11.4	9.45	4.92

Constant Power Discharge Characteristics Unit: W (25℃, 77℉)

F.V/Time	5MIN	10MIN	15MIN	30MIN	60MIN	90MIN	2HR	3HR	5HR	8HR	10HR	20HR
1.60V	4159	2950	2331	1436	849	610	482	342	223	153	125	63.5
1.67V	4008	2837	2273	1417	843	607	480	340	222	152	124	63.3
1.70V	3863	2772	2252	1404	840	604	478	339	221	151	123	63.2
1.75V	3572	2623	2181	1372	830	599	475	337	220	150	122	62.4
1.80V	3184	2442	2049	1316	809	585	465	331	217	148	121	61.4
1.85V	2769	2227	1856	1234	767	557	444	320	210	142	117	60.0

Please refer to the official site for the latest rating confirmation. URL: www.csb-battery.com Issued: 170201

17,100 VA (Elevator Plus Exhaust Fan) x PF 1.0 / Efficiency 93.5% / 40 pcs per string / 475W = 0.96 (96%) Of The Currently Configured String Power Is Required To Meet The 2 Hour Minute Backup Time Requirement

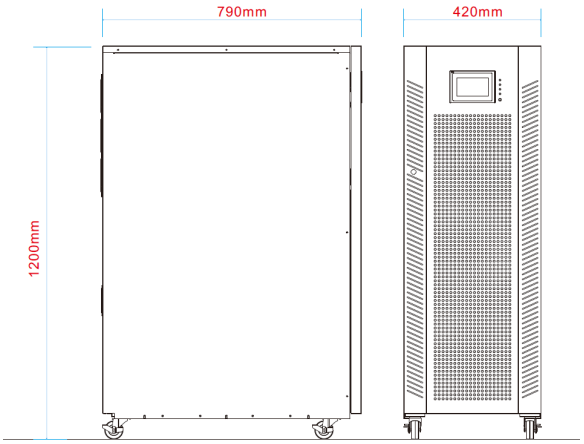
Based On The Above Calculation, 96% (0.96) Of The Existing String Of 40 Individual 12 Volt DC 100 Amp Hour Batteries Is Required To Meet The 2 Hour Requirement.

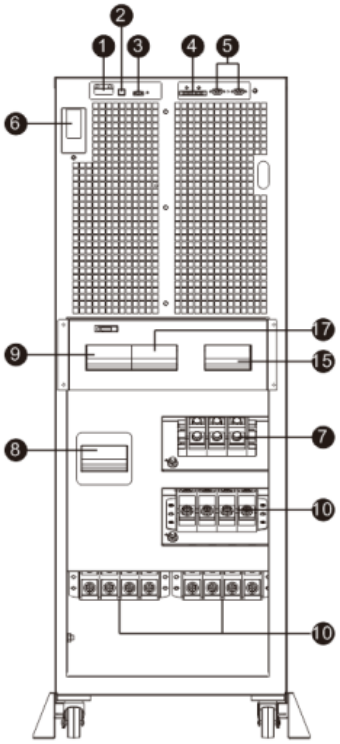
Using This Battery Configuration, The Average 17.1KVA Load Will Have Approximately 125 Minutes Of Backup Power (120 Minutes / 0.96).

In Conclusion, Based On The Above Calculations, The UPS With 40 Individual 12 Volt DC, 100 Amp Hour (CSB Model# GPL121000) Batteries Can Provide Backup Power To A Continuous 17.1KVA Load For 125 Minutes.

Section 3. UPS Configuration

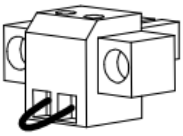
Description:	BBP 3 Phase 120/208Y On-Line Double Conversion UPS
Model:	BBP-AR-33-40K
Power Capacity:	40 KVA / 40 KW
Input:	3 Phase, 4 Wire + Ground (WYE), 208/120 Volts +/- 15%, 60Hz
Output:	3 Phase, 4 Wire + Ground (WYE), 208/120 Volts +/- 1%, 60Hz
Operating Temperature:	0C ~ +40C
Dimensions:	790 D*420 W*1200 H (mm) | 31.5 D*17 W*47.5 H (inches)
Weight:	113 Kgs (249.5 lbs)

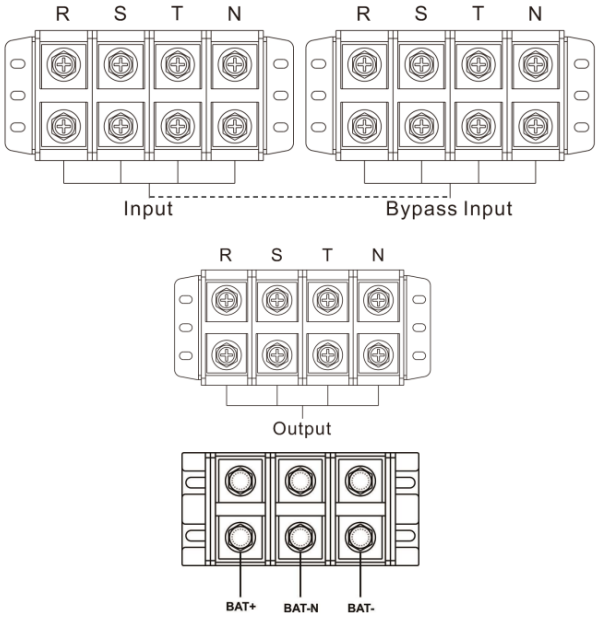




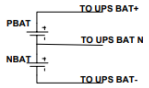
Front Cover Removed

1. RS-232 communication port (only for firmware updates)
2. USB communication port
3. Emergency power off function connector (EPO connector)
   Note: Keep the EPO connector closed for UPS normal operation.
   To activate EPO function, please remove the jumper
4. Share current port (only available for parallel model)
5. Parallel port (only available for parallel model)
6. Intelligent slot
7. External battery connector (Only available for long-run model)
8. Line input circuit breaker/switch
9. Maintenance bypass switch
10. Input/Output terminal (Refer to diagram 3 for the details)
11. Line input terminal
12. Output terminal
13. Input grounding terminal
14. Output grounding terminal
15. Bypass input circuit breaker/switch
16. Bypass input terminal
17. Output circuit breaker



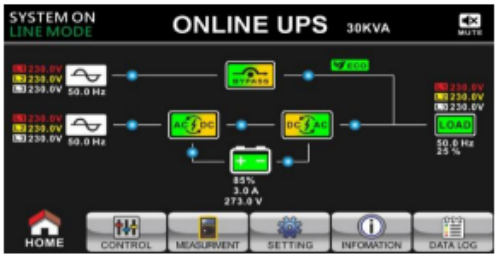


Terminal block wiring diagram for 30KL/40KL



BATTERY BACKUP POWER

BATTERY BACKUP POWER
WWW.BACKUPBATTERYPOWER.COM
(855) 330-7799



- True double-conversion
- DSP technology guarantees high performance
- 4.3" LCD for comprehensive UPS information
- Active power factor correction in all phases
- 50Hz/60Hz frequency converter mode
- ECO mode operation for energy saving (ECO)
- Emergency power off function (EPO)
- Generator compatible
- SNMP+USB multiple communications
- 3-stage extendable charging design for optimized battery performance
- Maintenance bypass available
- Parallel operation with commom battery
- Dual AC inputs
- Optional parallel operation

3P/3P LV (UL) 10K~40K ONLINE UPS SELECTION GUIDE

MODEL		BBP-AR-33-10K	BBP-AR-33-15K	BBP-AR-33-20K	BBP-AR-33-30K	BBP-AR-33-40K
PHASE		3-phase in/3-phase out				
CAPACITY		10KVA / 10KW	15KVA / 15KW	20KVA / 20KW	30KVA / 30KW	40KVA / 40KW
INPUT						
Nominal Voltage		120/208Y Or 127/220Y VAC (3Ph+N)				
Voltage Range		138~270 VAC (3-phase) @ 50% load 173~253 VAC (3-phase) @ 100% load				
Frequency Range		46~54 Hz or 56~64Hz				
Power Factor		≥ 0.99 @ 100% load				
OUTPUT						
Output Voltage		120/208Y Or 127/220Y VAC (3Ph+N)				
AC Voltage Regulation (Batt. Mode)		± 1%				
Frequency Range (Synchronized Range)		46~54Hz or 56~64Hz				
Frequency Range (Batt. Mode)		50 Hz ± 0.1 Hz or 60 Hz ± 0.1 Hz				
Current Crest Ratio		3:1 (max.)				
Harmonic Distortion		≤ 2 % THD (Linear Load) ≤ 4 % THD (Non-linear Load PF≥0.8)				
Transfer Time	AC mode to Battery mode	zero				
	Inverter to Bypass	zero				
Waveform (Batt. Mode)		Pure Sine Wave				
Overload	AC Mode	100-110% for 1 hr, 110-130% for 1 min, >130% for 1 second				
	Battery Mode	100-110% for 30 seconds, 110-130% for 10 seconds, >130% for 1 second				
PARALLEL CAPACITY		up to 3 units in parallel				
EFFICIENCY						
AC Mode		94%				
ECO Mode		97%				
Battery Mode		93.5%				
BATTERY						
Standard Model	Battery Type	12V/9Ah	12V/9Ah	12V/9Ah	N/A	
	Numbers	(10+10)pcs x 1 string Optional for max. 2 strings	(10+10)pcs x 2 strings Optional for max. 3 strings	(10+10)pcs x 3 strings		
	Typical Recharge Time	9 hours recover to 90% capacity				
	Charging Current (max.)	1A/2A/3A/4A (Adjustable)				
	Charging Voltage	+/-136.5 VDC				
Long-run Model	Battery Type	Depending on the capacity of external batteries				
	Numbers	16~20 pcs (Adjustable)				
	Charging Current	4A/8A/12A (Adjustable) Max. 12A	4A/8A/12A (Adjustable) Optional parallel up to Max. 20A		4A/8A/12A/16A (Adjustable) Optional parlel up to Max. 24A	
	Charging Voltage	+/-13.65V*N (N = 8~10)				
INDICATORS						
LCD Panel		UPS status, Load level, Battery level, Input/Output voltage, Discharge timer, and Fault conditions				
ALARM						
Battery Mode		Sounding every 4 seconds				
Low Battery		Sounding every second				
Overload		Sounding twice every second				
Fault		Continuously sounding				
PHYSICAL						
Standard Model	Dimension, D X W X H (mm)/(inches)	667x250x827 / 26.5x10x33	865x300x1020 / 34x12x40.25		N/A	
	Net Weight (kgs) / (lbs)	95 / 209	181 / 399	231 / 509.5		
Long-run Model	Dimension, D X W X H (mm)	667x250x827 / 26.5x10x33	865x300x1020 / 34x12x40.25		790x420x1200 / 31.5x17x47.5	
	Net Weight (kgs) / (lbs)	45 / 99.5	81 / 179		108 / 238	113 / 249.5
ENVIRONMENT						
Operation Temperture		0-40°C				
Operation Humidity		<95% and non-condersing				
Noise Level		Less than 60dB @ 1 Meter	Less than 70dB @ 1 Meter			Less than 75dB @ 1 Meter
MANAGEMENT						
Smart USB		Supports Windows® 2000/2003/XP/Vista/2008, Windows® 7/8/10, Linux and MAC				
Optional SNMP		Power management from SNMP manager and web browser				

*If the UPS is installed or used in a place where the altitude is above than 1000m, the output power must be derated 1% per 100m.

Product specifications are subject to change without further notice

Section 4. External Battery Cabinet Configuration

Description:	External Battery Cabinet
Model:	BBP-AR-33-EBP-LARGE
Input/Output:	DC Connections To Controlling UPS
Battery Type:	CSB Model# GPL121000
Battery Voltage:	12 Volts DC
Battery Amp Hour Rating:	100 Amp Hours
Battery Quantity:	40 Batteries
Battery Configuration:	40 Individual 12 Volt DC Batteries Total, 10 Batteries Wired In Series Per Tray, 4 Strings Of 10 Batteries, Creating Quad 120Volt DC Bus
Operating Temperature:	0C ~ +40C
Dimensions:	1135 D * 826 W * 1500 H (mm)
Weight:	158 Kgs Empty / 1,518 Kgs With Batteries

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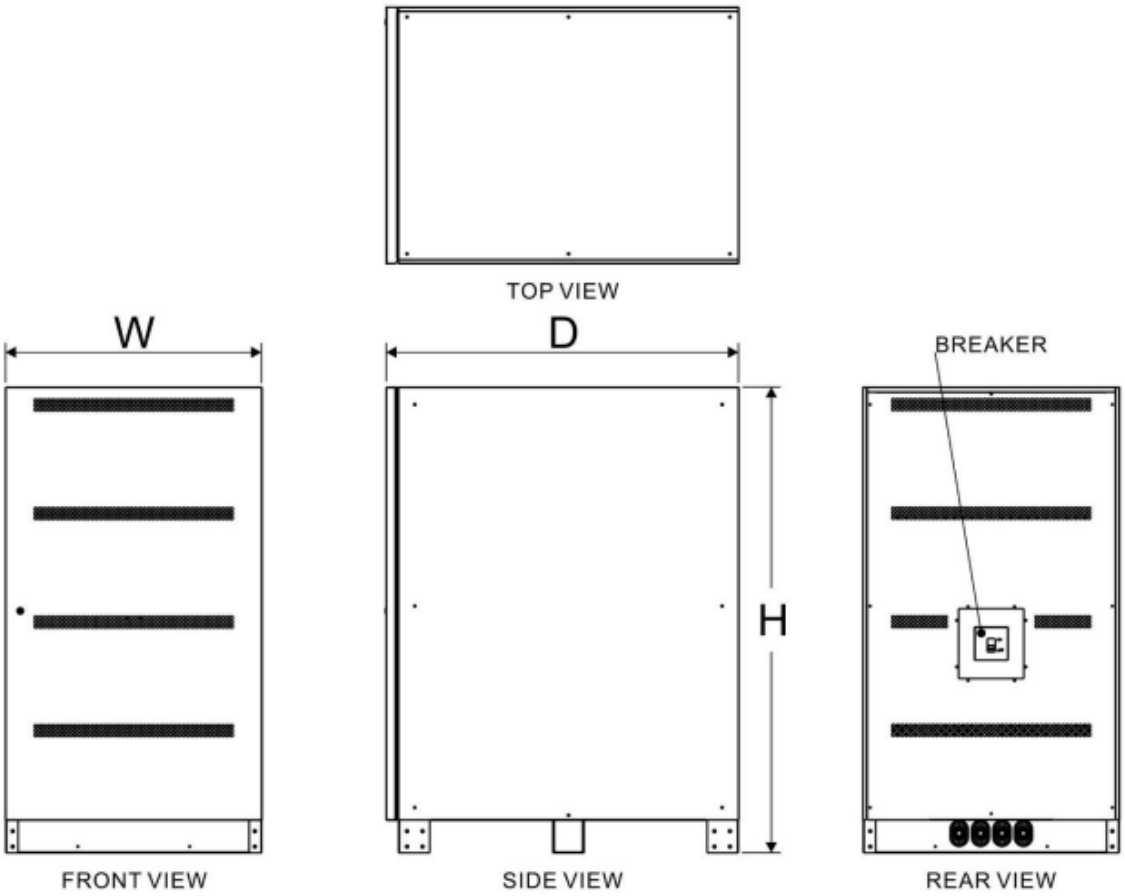
100Ah-12V Battery Cabinet

1. Cabinet Overlook

- Dimension (D x W x H): 1135 mm x 826 mm x 1500 mm
- Net weight for empty cabinet: 157.6kg

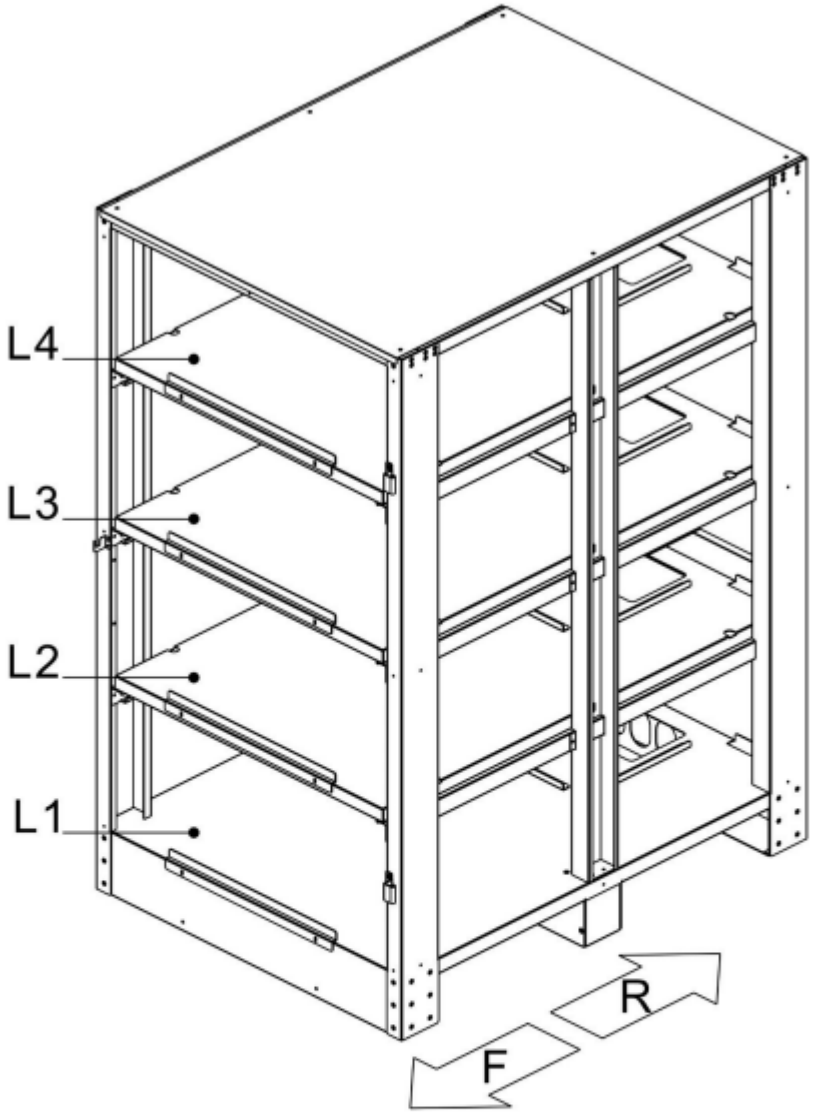


2. Preparation

2-1. Mechanical Overview

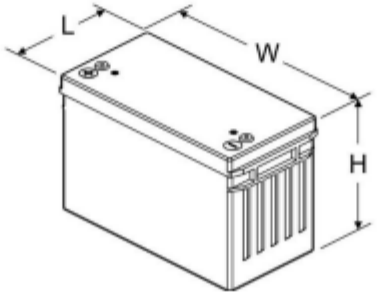
- Battery cabinet
  The "F" marks the front side of the battery cabinet.
  The "R" marks the rear side of the battery cabinet.

- Battery shelf
  The cabinet includes four trays, from L1 (bottom) to L4 (top).

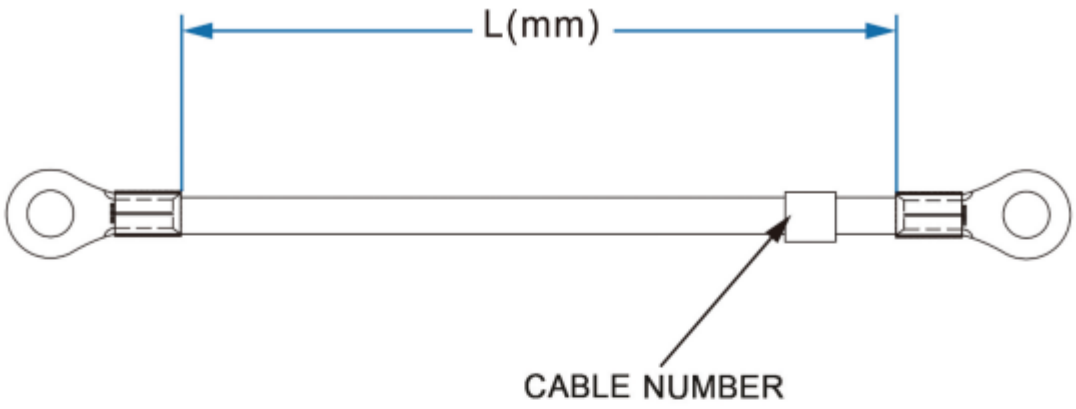


2-2. Battery Requirement

- Lead-Acid cell type and quantity : 12V 100Ah x 40 pieces
- Maximum size for lead-acid battery (L x W x H) :170 x 343 x 217 mm.

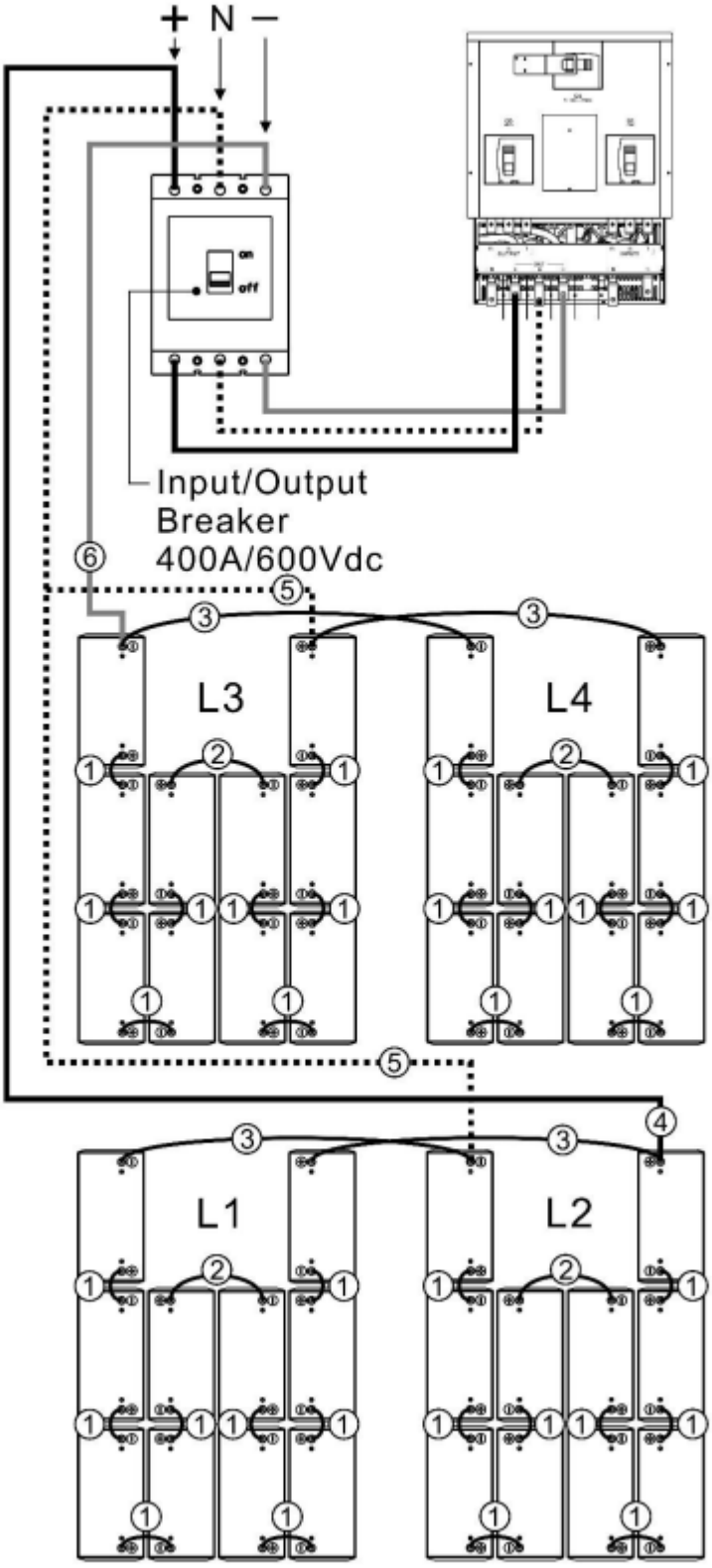


2-3. Cable Specification



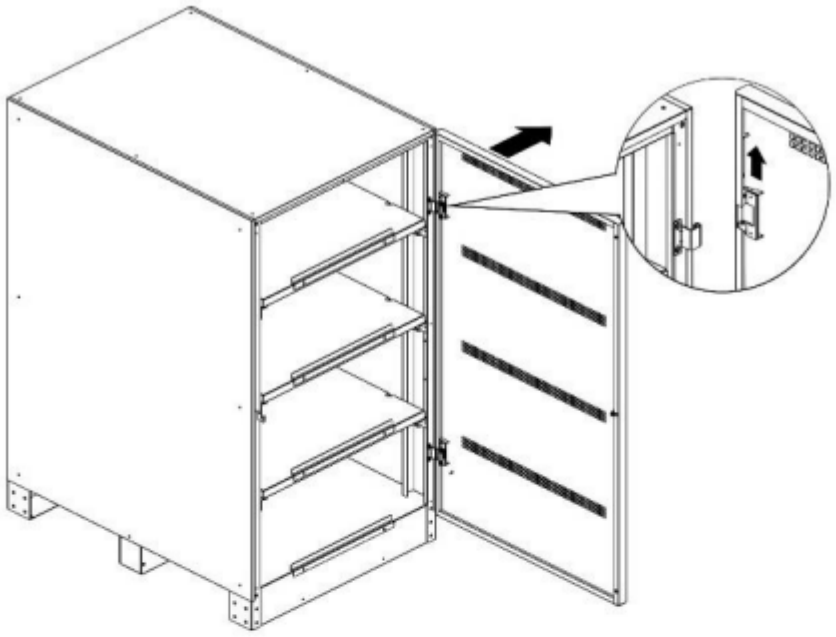
ITEM	DESCRIPTION	CABLE LENGTH (mm)	QUANTITY (PCS)	CABLE NUMBER
①	#1 AWG cable (black)	200	32	1
②	#1 AWG cable (black)	350	4	3
③	#1 AWG cable (black)	650	4	2
④	#4/0 AWG cable (black)	500	1	BAT +
⑤	#4/0 AWG cable (black)	500	2	N
⑥	#4/0 AWG cable (black)	500	1	BAT -

2-4. Battery Wiring

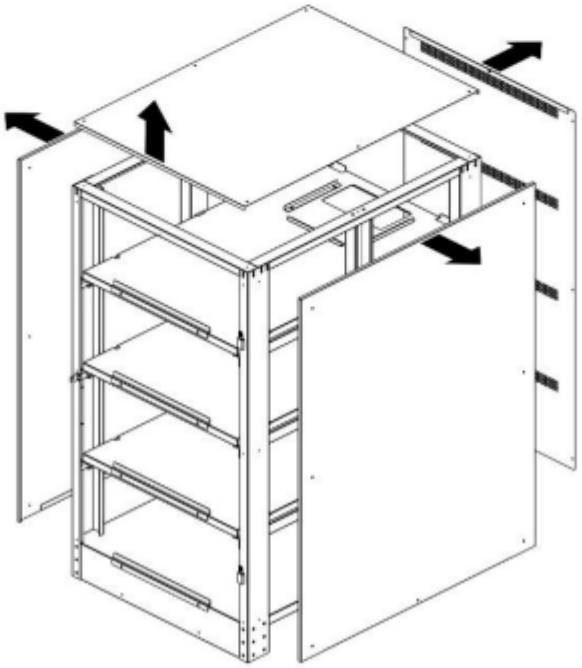


3. Installation

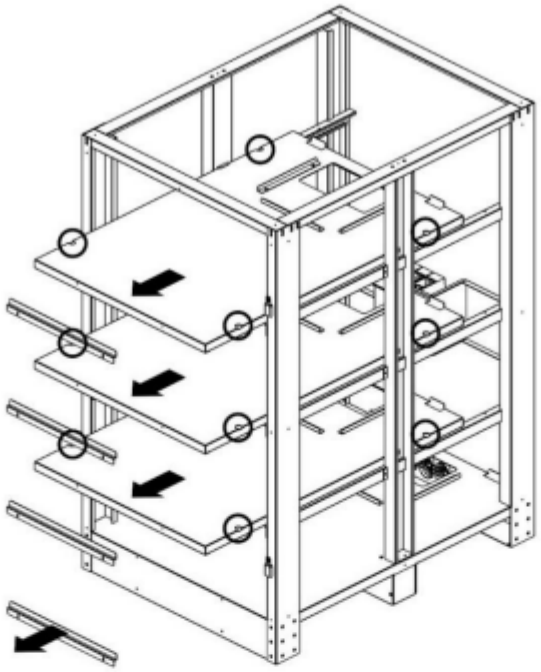
Step 1:
Pull out the latch from the front door hinge to remove door.



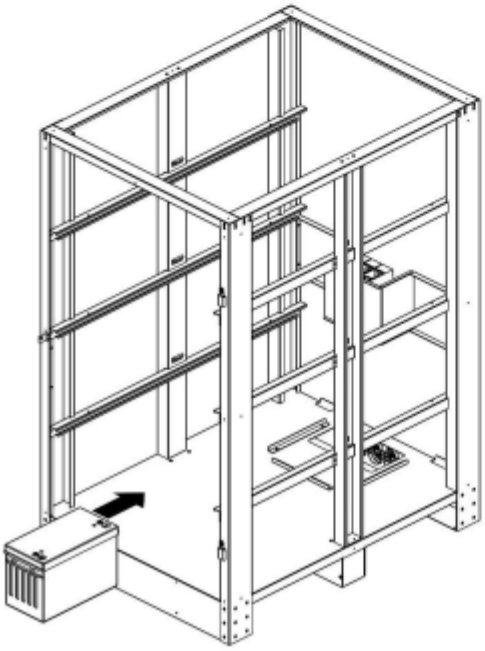
Step 2:
Remove M4 screws with a Phillips screwdriver. Then, take out the side, top and rear panels.

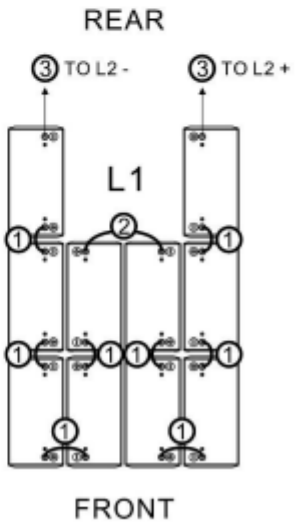


Step 3:
Remove M6 screws from each tray. Then, remove all trays from cabinet as shown below.

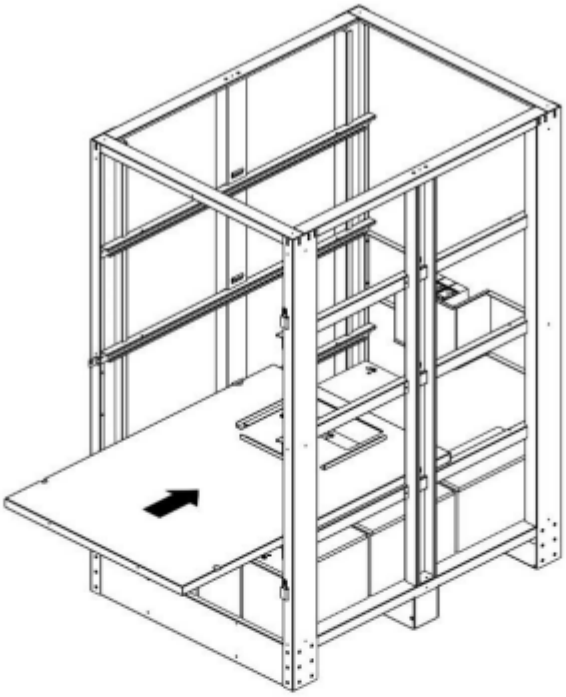


Step 4:
Install batteries. Please install battery inside of cabinet from the bottom (L1) to the top (L4). See below figure for internal wiring on the bottom layer (L1). Refer to the table and diagram in section 2-3 for the appropriate wire jumper needed.

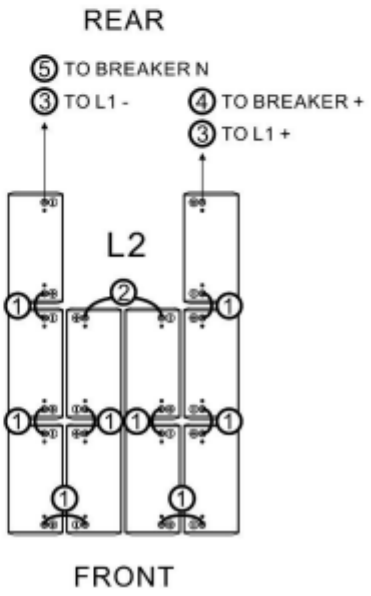




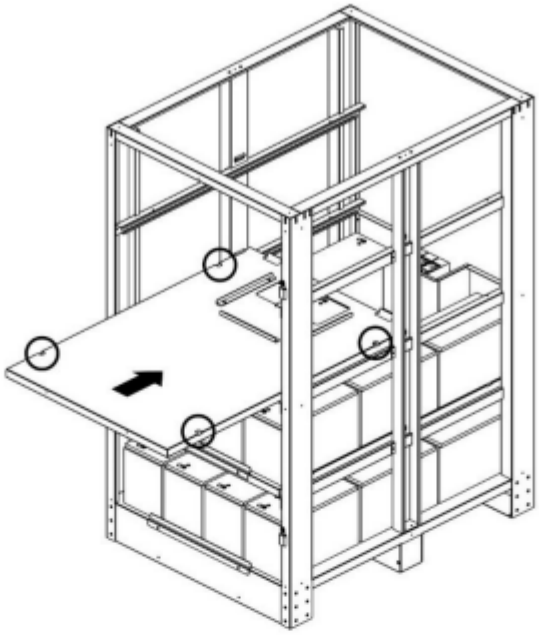
Step 5:
Use the saved M6 screws to secure the battery tray L2.



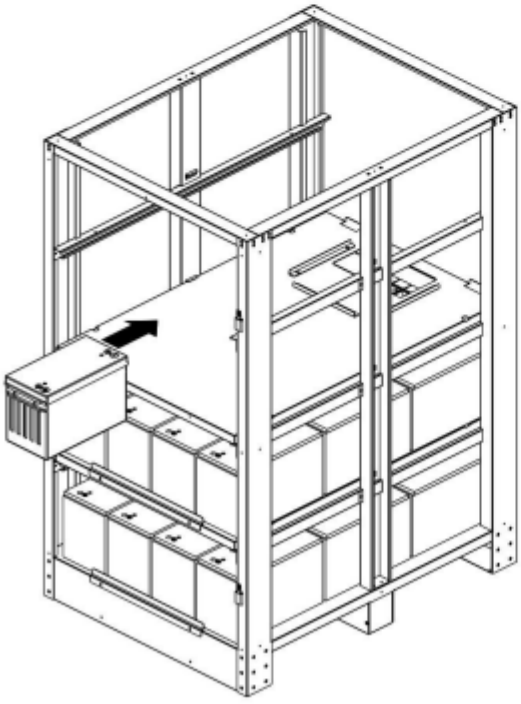
Step 6:
See the below figure for internal wiring on the second battery layer L2. Refer to the table and diagram in section 2-3 for the appropriate wire jumper needed.

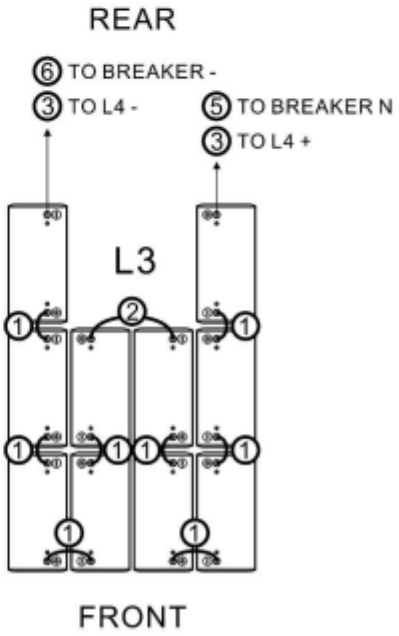


Step 7:
Use the saved M6 screws to secure the battery tray L3.



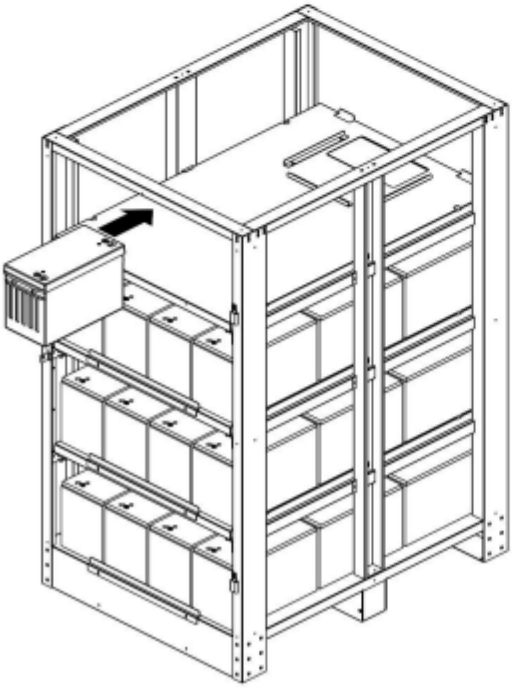
Step 8:
See the below figure for internal wiring on the third battery layer L3. Refer to the table and diagram in section 2-3 for the appropriate wire jumper needed.

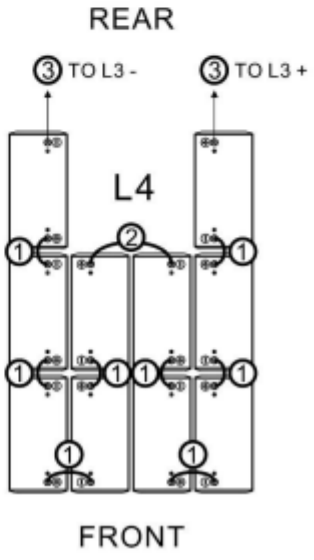




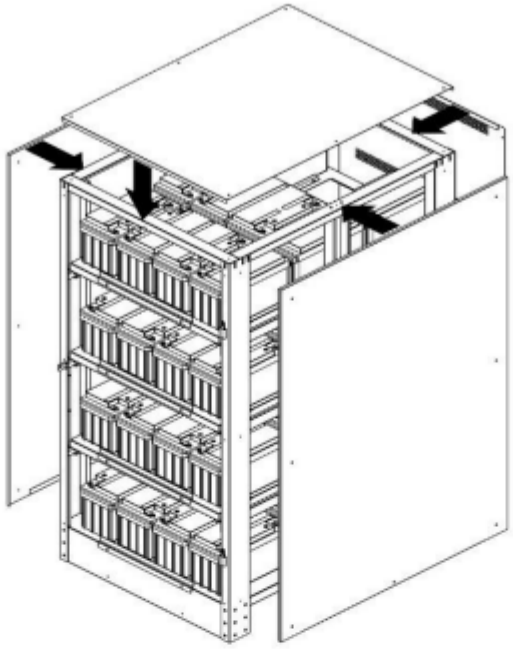
Step 9:
Use the saved M6 screws to secure the battery tray L4.

Step 10:
See the below figure for internal wiring on the top battery layer L4. Refer to the table and diagram in section 2-3 for the appropriate wire jumper needed.

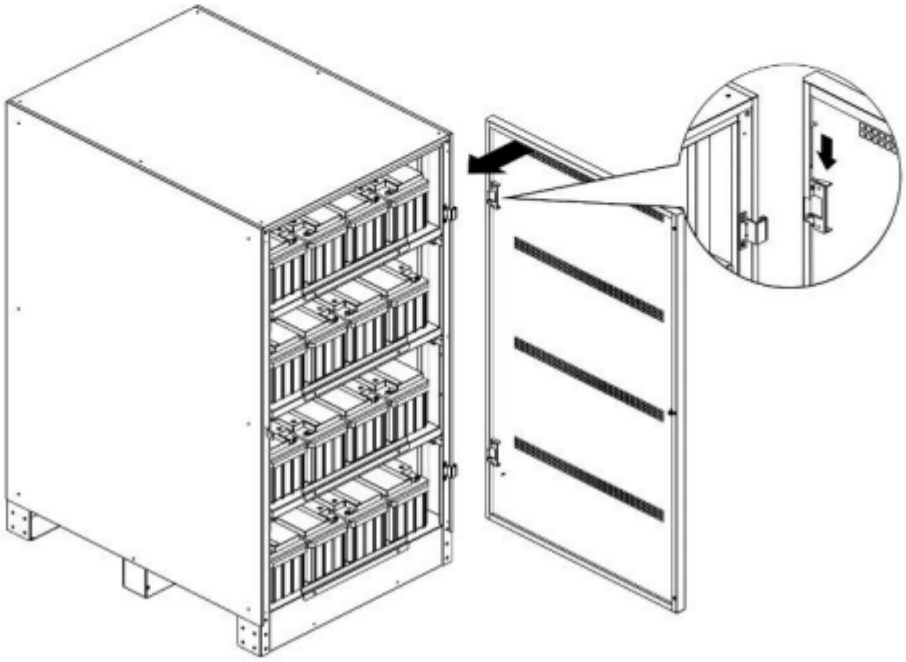




Step 11:
Use the saved M4 screws to reinstall and secure the side, top and rear panels to the battery cabinet frame.



Step 12:
Insert the latch to the door hinge and put the front door back to original position.



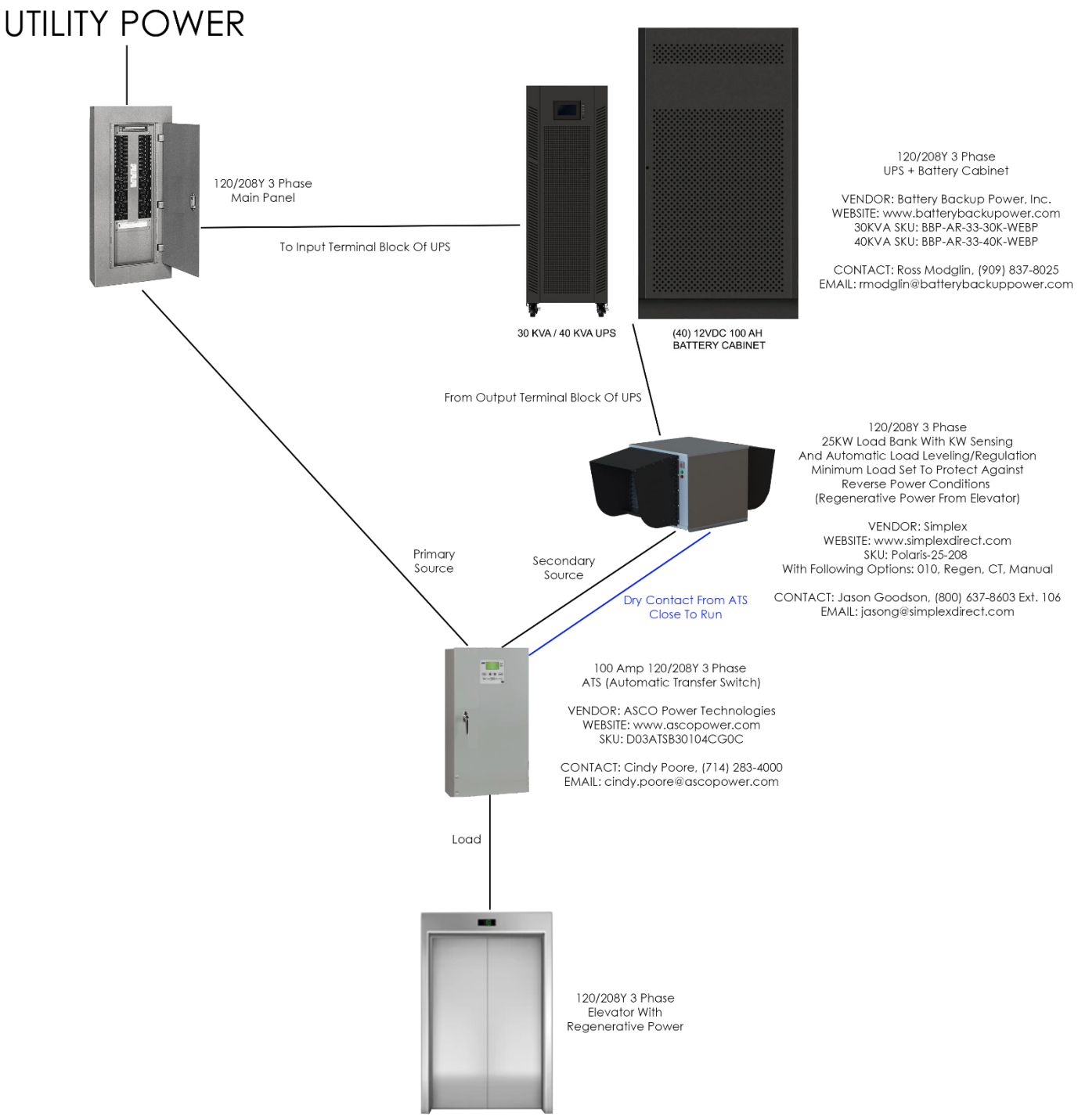
Section 4. Regenerative Power

If the elevator has regenerative power, the UPS can not be directly connected to the elevator without also connecting a properly sized load bank. Battery Backup Power, Inc. can supply the necessary components to ensure compatibility with regenerative power if requested (load bank, ATS, etc.). The load bank will ensure that there is always a load on the UPS output.

If the UPS is connected directly to an elevator with regenerative power without a load bank to nullify the regenerative power, the UPS will be damaged and the warranty voided.

Please see below for the part numbers and diagram on how to connect an auto adjusting load bank to the UPS output for compatibility with an elevator that has regenerative power.

SEE NEXT PAGE FOR DIAGRAM


UTILITY POWER
120/208Y 3 Phase
Main Panel
To Input Terminal Block Of UPS
30 KVA / 40 KVA UPS
(40) 12VDC 100 AH
BATTERY CABINET
120/208Y 3 Phase
UPS + Battery Cabinet
VENDOR: Battery Backup Power, Inc.
WEBSITE: www.batterybackupower.com
30KVA SKU: BBP-AR-33-30K-WEBP
40KVA SKU: BBP-AR-33-40K-WEBP
CONTACT: Ross Modglin, (909) 837-8025
EMAIL: rmodglin@batterybackuppower.com
From Output Terminal Block Of UPS
120/208Y 3 Phase
25KW Load Bank With KW Sensing
And Automatic Load Leveling/Regulation
Minimum Load Set To Protect Against
Reverse Power Conditions
(Regenerative Power From Elevator)
VENDOR: Simplex
WEBSITE: www.simplexdirect.com
SKU: Polaris-25-208
With Following Options: 010, Regen, CT, Manual
CONTACT: Jason Goodson, (800) 637-8603 Ext. 106
EMAIL: jasong@simplexdirect.com
Primary
Source
Secondary
Source
Dry Contact From ATS
Close To Run
100 Amp 120/208Y 3 Phase
ATS (Automatic Transfer Switch)
VENDOR: ASCO Power Technologies
WEBSITE: www.ascopower.com
SKU: D03ATSB30104CG0C
CONTACT: Cindy Poore, (714) 283-4000
EMAIL: cindy.poore@ascopower.com
Load
120/208Y 3 Phase
Elevator With
Regenerative Power

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