



NetSure™

## 710 ORDERING GUIDE

+24 VDC Power Solutions

- Medium System (125 A to 2000 A)



## Description

The modular NetSure™ 710 power system with 3000 watt rectifiers and 1500 watt DC to DC converters provides up to 2000 amps of current for +24 volt systems with up to 500 amps at -48 volts. The basic components of the power system include the ACU+ control unit, module mounting shelf assemblies which house the rectifiers and converters, and a modular distribution cabinet.

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**REQUESTER'S CONTACT INFORMATION:**

Name/Title*	Company*
Email*	Phone*

\*These are required fields.

### Step 1. Choose Common Equipment, Main Bay

Select one, quantity of one.

LIST NUMBER	VERTIV PART NUMBER	DESCRIPTION	QTY.	NOTES
List 1	58112700001	Common equipment, main bay		All complete power plants require one main bay

### Step 2. Choose Relay Rack or Shipping Brackets

Select one, quantity of one.

LIST NUMBER	VERTIV PART NUMBER	DESCRIPTION	QTY.	NOTES	PICTORIAL
n/a	509638 and 509639	Shipping brackets		22 RU	
n/a	543159	Relay rack, 21.625" H x 24.376" W x 15" D		11 RU	Seismic Zone-4
n/a	543151	Relay rack, 25.656" H x 24.376" W x 15" D		13 RU	Seismic Zone-4
n/a	543152	Relay rack, 27.406" H x 24.376" W x 15" D		14 RU	Seismic Zone-4
n/a	543153	Relay rack, 36.156" H x 24.376" W x 15" D		19 RU	Seismic Zone-4
n/a	543154	Relay rack, 39.656" H x 24.376" W x 15" D		21 RU	Seismic Zone-4
n/a	543155	Relay rack, 43.156" H x 24.376" W x 15" D		23 RU	Seismic Zone-4
n/a	543156	Relay rack, 51.906" H x 24.376" W x 15" D		28 RU	Welded
n/a	543157	Relay rack, 71.156" H x 24.376" W x 15" D		39 RU	Welded
n/a	543161	Relay rack, 72.000" H x 24.375" W x 15" D		37 RU	Welded




*NetSure™ 710 Power System with 4-row Distribution Cabinet and Battery Trays*

n/a	543162	Relay rack, 84.000" H x 24.375" W x 15" D		45 RU	Welded
n/a	541340	Relay rack, 84.000" H x 25.800" W x 18" D		45 RU	Seismic Zone-4
n/a	547862	Relay rack, 85.750" H x 24.375" W x 15" D		46 RU	Welded
n/a	543163	Relay rack, 90.000" H x 24.375" W x 15" D		48 RU	Welded
n/a	543164	Relay rack, 96.000" H x 24.375" W x 15" D		51 RU	Welded


## Step 2a. Optional - Choose Battery-Top Mounting Kit

Select one, quantity of one, if desired.

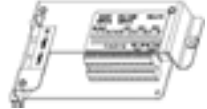



LIST NUMBER	VERTIV PART NUMBER	DESCRIPTION	QTY.	NOTES	PICTORIAL
n/a	509819	Kit, battery mount transition plates for GNB 3-100G19, 3-100G27, 3-100G33		Consists of two transition plates with three hole patterns and hardware (3/8") to mount the plates to the relay racks ranging from 25.656" H to 71.156" H. Customer must supply hardware to mount the transition plates to the battery.	
n/a	514596	Kit, battery mount transition plates for GNB 6-90G09			
n/a	514880	Kit, battery mount transition plates for GNB 3-100G21, 3-100G25, 3-100G31			

## Step 3. Choose Controller

Select one, quantity of one.


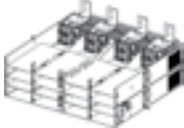


LIST NUMBER	VERTIV PART NUMBER	DESCRIPTION	QTY.	NOTES	PICTORIAL
n/a	1M820DNA	ACU+ controller		Standard or special firmware configuration can be assigned. Main bay comes equipped with IB2 interface board which provides (8) programmable and mappable output relays, (8) programmable binary inputs and (2) temperature inputs.	

## Step 4. Optional - Choose Controller Interfaces

LIST NUMBER	VERTIV PART NUMBER	DESCRIPTION	QTY.	NOTES	PICTORIAL
n/a	548120	EIB, extended interface board		For use in List 1 (main bay) only. Maximum quantity of one. Provides (5) relay outputs, (2) temperature inputs, (8) battery midpoint monitoring inputs and (3) shunt inputs. Mounts internal to power system.	
n/a	548078	SMDU+, 25-input shunt module		Provides (25) shunt inputs. Maximum quantity of one per bay. For use with GJ/218 Breakers with shunts or TPH or TPL-B fuse panels with shunts. Mounts internal to power system.	
n/a	547490	SMTEMP, 8-input temperature module		Provides (8) temperature inputs. Maximum quantity of eight per system. Mounts external to power system.	
n/a	556155	Temperature probe, 3.3 meters long (0.3 m sensor and 3.0 m extension)		Provides temperature monitoring and alarming for battery or ambient. Battery-assigned probes provide temperature compensation and battery thermal runaway management.	
n/a	552992	Temperature probe, 10.3 meters long (0.3 m sensor and 10 m extension)		Provides temperature monitoring and alarming for battery or ambient. Battery-assigned probes provide temperature compensation and battery thermal runaway management.	<i>Temperature Probe</i>
n/a	0419122	Extension, 10 m temperature probe		Provides 10 meter extension for temperature probe.	<i>Extension</i>

## Step 5. Choose Rectifier Shelf by Quantity and Type

Select one List 30 and one rectifier shelf type.

LIST NUMBER	VERTIV PART NUMBER	DESCRIPTION	QTY.	RACK SPACE	NOTES	PICTORIAL
30	58112700030	Interface components for rectifier shelf		n/a	Order one.	
n/a	58870520101	Rectifier shelf, eight positions		2 RU	Order one as required. Each position accepts one 3000 watt rectifier or 1500 watt converter (if equipped with List 60).	
n/a	58870520201	Rectifier shelf, sixteen positions		4 RU	Order one as required. Each position accepts one 3000 watt rectifier or 1500 watt converter (if equipped with List 60).	
n/a	58870520301	Rectifier shelf, twenty-four positions		6 RU	Order one as required. Each position accepts one 3000 watt rectifier or 1500 watt converter (if equipped with List 60).	
n/a	58870520401	Rectifier shelf, thirty-two positions		8 RU	Order one as required. Each position accepts one 3000 watt rectifier or 1500 watt converter (if equipped with List 60).	


## Step 6. Choose AC Input Wiring Scheme

Select one, quantity of one.



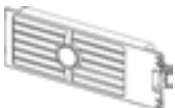
LIST NUMBER	VERTIV PART NUMBER	DESCRIPTION	QTY.	NOTES
List 40	58112700040	Front access AC input terminations, single phase, 1 rectifier per AC feed		Provides 1 AC feed per 1 rectifier single phase input terminations for all rectifier positions in the bay
List 41	58112700041	Front access AC input terminations, single phase, 2 rectifiers per AC feed		Provides 1 AC feed per 2 rectifiers single phase input terminations for all rectifier positions in the bay

## Step 7. Optional - Choose +24 VDC to -48 VDC Converter

Select quantity of List 60 as required.




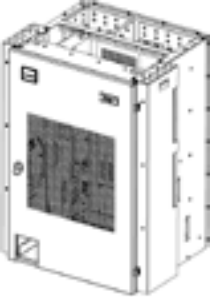
LIST NUMBER	VERTIV PART NUMBER	DESCRIPTION	QTY.	RACK SPACE	NOTES	PICTORIAL
List 60	58112700060	Kit, +24 VDC to -48 VDC converter, four positions.		n/a	Provides interconnecting cables to utilize four shelf positions as converter module positions. Maximum of one List 60 per eight module mounting positions (half of the positions can be set up to accept converter modules).	

## Step 8. Order Rectifiers and Converter Modules

LIST NUMBER	VERTIV PART NUMBER	DESCRIPTION	QTY.	NOTES	PICTORIAL
n/a	1R243000	Rectifier, R24-3000, 24 VDC, 3000 watts		Provides 125 amps at 24 VDC	
n/a	1C24481500	Converter, C24/48-1500, 1500 watts		Provides 31.25 amps at 48 VDC	
n/a	540959	Blank cover, rectifier/converter position		Optional cover for empty rectifier/converter position	


## Step 9. Choose Distribution Cabinet Size

Select one, quantity of one.

LIST NUMBER	VERTIV PART NUMBER	DESCRIPTION	QTY.	RACK SPACE	NOTES	PICTORIAL
List 21	58112700021	Distribution cabinet, one row, 600 amps maximum capacity		7 RU	Accepts one (1) distribution panel	
List 22	58112700022	Distribution cabinet, two rows, 1200 amps maximum capacity		11 RU	Accepts up to two (2) total distribution panels, battery disconnect distribution panels, and/or return bar panel	
List 23	58112700023	Distribution cabinet, three rows, 1800 amps maximum capacity		15 RU	Accepts up to three (3) total distribution panels, battery disconnect distribution panels, and/or return bar panel	
List 24	58112700024	Distribution cabinet, four rows, 2000 amps maximum capacity		19 RU	Accepts up to four (4) total distribution panels, battery disconnect distribution panels, and/or return bar panel	





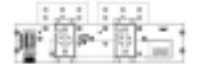









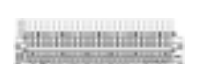



## Step 9a. Optional - Choose Distribution Cabinet Top Shield

Select if desired.

LIST NUMBER	VERTIV PART NUMBER	DESCRIPTION	QTY.	NOTES	PICTORIAL
List 29	58112700029	Distribution cabinet top shield		Plastic shield covers all wiring access openings in top of distribution cabinet. Individual cutouts can be removed for wiring as required for specific installation.	






## Step 10. Choose Distribution Panels

Select one per row. Rows may be left vacant for future expansion. Note restrictions. Select List LL LVL D for each panel as desired.

LIST NUMBER	VERTIV PART NUMBER	DESCRIPTION	QTY.	LIST LL - LVL D (Y/N)	NOTES	PICTORIAL
List AA	581127000AA	Dist panel, 24-position bullet w/ return bar			Mounts in any row	
List AB	581127000AB	Dist panel, 24-position bullet w/o return bar			Mounts in any row	
List AC	581127000AC	Dist panel, 4-position GJ/218 CB w/ return bar			Mounts in any row	
List AD	581127000AD	Dist panel, 4-position GJ/218 CB w/o return bar			Mounts in any row	
List AE	581127000AE	Dist panel, 2-position TPH fuse w/o return bar			Mounts in any row	
List AF	581127000AF	Dist panel, 2-position TPH fuse w/ shunts w/o return bar			Mounts in any row	
List AG	581127000AG	Dist panel, 4-position TPH fuse w/o return bar			Mounts in any row	
List AH	581127000AH	Dist panel, 4-position TPH fuse w/ shunts w/o return bar			Mounts in any row	
List AJ	581127000AJ	Dist panel, 4-position TPL-B fuse w/o return bar			Mounts in any row	
List AK	581127000AK	Dist panel, 4-position TPL-B fuse w/ shunts w/o return bar			Mounts in any row	
List DA	581127000DA	Dist panel, (17) +24 V and (4) -48 V bullet positions w/ return bar			Maximum of two starting in bottom row	
List DB	581127000DB	Dist panel, (13) +24 V and (8) -48 V bullet positions w/ return bar			Maximum of two starting in bottom row	
List DC	581127000DC	Dist panel, (9) +24 V and (12) -48 V bullet positions w/ return bar			Maximum of two starting in bottom row	
List DD	581127000DD	Dist panel, (5) +24 V and (16) -48 V bullet positions w/ return bar			Maximum of two starting in bottom row	
List BA	581127000BA	Battery disconnect panel, 24-position bullet w/ return bar		n/a	For use with Lists 22, 23 and 24 only. Mounts in top row only.	
List BB	581127000BB	Battery disconnect panel, 24-position bullet w/o return bar		n/a	For use with Lists 22, 23 and 24 only. Mounts in top row only.	
List BC	581127000BC	Battery disconnect panel, 4-Position GJ/218 CB w/ return bar		n/a	For use with Lists 22, 23 and 24 only. Mounts in top row only.	
List BD	581127000BD	Battery disconnect panel, 4-position GJ/218 CB w/o return bar		n/a	For use with Lists 22, 23 and 24 only. Mounts in top row only.	

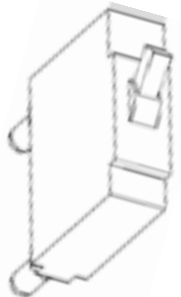


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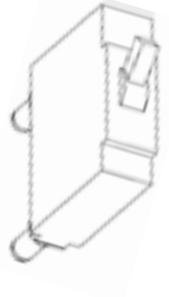

LIST NUMBER	VERTIV PART NUMBER	DESCRIPTION	QTY.	LIST LL - LVLD (Y/N)	NOTES	PICTORIAL
List BE	581127000BE	Battery disconnect panel, 2-position TPH fuse w/o return bar		n/a	For use with Lists 22, 23 and 24 only. Mounts in top row only.	
List BF	581127000BF	Battery disconnect panel, 2-position TPH fuse w/ shunts w/o return bar		n/a	For use with Lists 22, 23 and 24 only. Mounts in top row only.	
List BG	581127000BG	Battery disconnect panel, 4-position TPH fuse w/o return bar		n/a	For use with Lists 22, 23 and 24 only. Mounts in top row only.	
List BH	581127000BH	Battery disconnect panel, 4-position TPH fuse w/ shunts w/o return bar		n/a	For use with Lists 22, 23 and 24 only. Mounts in top row only.	
List GA	581127000GA	Return bar, 24 lug landing positions		n/a	Mounts in any row.	

## Step 11. Choose Distribution Devices for Mounting In Selected Distribution Panels

### Step 11a. Choose Bullet-Type Circuit Breakers and Adapter Kits

LIST NUMBER	VERTIV PART NUMBER	DESCRIPTION	QTY.	NOTES	PICTORIAL
Toggle Handle Electrical/Mechanical Trip Alarm (Black Handle) Bullet Breakers					
n/a	101596	CB, 1 A, bullet, toggle handle, E/M-trip		Occupies one position	
n/a	101597	CB, 3 A, bullet, toggle handle, E/M-trip		Occupies one position	
n/a	101598	CB, 5 A, bullet, toggle handle, E/M-trip		Occupies one position	
n/a	101599	CB, 10 A, bullet, toggle handle, E/M-trip		Occupies one position	
n/a	101600	CB, 15 A, bullet, toggle handle, E/M-trip		Occupies one position	
n/a	101601	CB, 20 A, bullet, toggle handle, E/M-trip		Occupies one position	
n/a	101602	CB, 25 A, bullet, toggle handle, E/M-trip		Occupies one position	
n/a	101603	CB, 30 A, bullet, toggle handle, E/M-trip		Occupies one position	
n/a	101604	CB, 35 A, bullet, toggle handle, E/M-trip		Occupies one position	
n/a	101605	CB, 40 A, bullet, toggle handle, E/M-trip		Occupies one position	
n/a	121997	CB, 45 A, bullet, toggle handle, E/M-trip		Occupies one position	
n/a	101606	CB, 50 A, bullet, toggle handle, E/M-trip		Occupies one position	
n/a	101607	CB, 60 A, bullet, toggle handle, E/M-trip		Occupies one position	
n/a	101608	CB, 70 A, bullet, toggle handle, E/M-trip		Occupies one position	
n/a	101609	CB, 75 A, bullet, toggle handle, E/M-trip		Occupies one position	
n/a	121995	CB, 80 A, bullet, toggle handle, E/M-trip		Occupies one position	
n/a	101610	CB, 100 A, bullet, toggle handle, E/M-trip		Occupies one position, space required	
n/a	516838	CB, 125 A, bullet, toggle handle, E/M-trip		Occupies two positions, space required	
n/a	516839	CB, 150 A, bullet, toggle handle, E/M-trip		Occupies two positions, space required	
n/a	144884	CB, 175 A, bullet, toggle handle, E/M-trip		Occupies two positions, space required	
n/a	121832	CB, 200 A, bullet, toggle handle, E/M-trip		Occupies two positions, space required	
n/a	144886	CB, 225 A, bullet, toggle handle, E/M-trip		Occupies three positions, space required	
n/a	121836	CB, 250 A, bullet, toggle handle, E/M-trip		Occupies three positions, space required	

## Step 11a. (continued)

LIST NUMBER	VERTIV PART NUMBER	DESCRIPTION	QTY.	NOTES	PICTORIAL	
<b>Toggle Handle Electrical Trip Alarm (White Handle) Bullet Breakers</b>						
n/a	102272	CB, 1 A, bullet, toggle handle, E-trip		Occupies one position		
n/a	102273	CB, 3 A, bullet, toggle handle, E-trip		Occupies one position		
n/a	102274	CB, 5 A, bullet, toggle handle, E-trip		Occupies one position		
n/a	102275	CB, 10 A, bullet, toggle handle, E-trip		Occupies one position		
n/a	102276	CB, 15 A, bullet, toggle handle, E-trip		Occupies one position		
n/a	102277	CB, 20 A, bullet, toggle handle, E-trip		Occupies one position		
n/a	102278	CB, 25 A, bullet, toggle handle, E-trip		Occupies one position		
n/a	102279	CB, 30 A, bullet, toggle handle, E-trip		Occupies one position		
n/a	102280	CB, 35 A, bullet, toggle handle, E-trip		Occupies one position		
n/a	102281	CB, 40 A, bullet, toggle handle, E-trip		Occupies one position		
n/a	121998	CB, 45 A, bullet, toggle handle, E-trip		Occupies one position		
n/a	102282	CB, 50 A, bullet, toggle handle, E-trip		Occupies one position		
n/a	102283	CB, 60 A, bullet, toggle handle, E-trip		Occupies one position		
n/a	102284	CB, 70 A, bullet, toggle handle, E-trip		Occupies one position		
n/a	102285	CB, 75 A, bullet, toggle handle, E-trip		Occupies one position		
n/a	121996	CB, 80 A, bullet, toggle handle, E-trip		Occupies one position		
n/a	102286	CB, 100 A, bullet, toggle handle, E-trip		Occupies one position, space required		
n/a	516991	CB, 125 A, bullet, toggle handle, E-trip		Occupies two positions, space required		
n/a	516993	CB, 150 A, bullet, toggle handle, E-trip		Occupies two positions, space required		
n/a	144883	CB, 175 A, bullet, toggle handle, E-trip		Occupies two positions, space required		
n/a	121831	CB, 200 A, bullet, toggle handle, E-trip		Occupies two positions, space required		
n/a	144885	CB, 225 A, bullet, toggle handle, E-trip		Occupies three positions, space required		
n/a	121835	CB, 250 A, bullet, toggle handle, E-trip		Occupies three positions, space required		
<b>Flat Rocker Handle Electrical/Mechanical Trip Alarm (Black Handle) Bullet Breakers</b>						
n/a	142878	CB, 1 A, bullet, flat rocker handle, E/M-trip		Occupies one position		
n/a	142879	CB, 3 A, bullet, flat rocker handle, E/M-trip		Occupies one position		
n/a	142880	CB, 5 A, bullet, flat rocker handle, E/M-trip		Occupies one position		
n/a	142881	CB, 10 A, bullet, flat rocker handle, E/M-trip		Occupies one position		
n/a	142882	CB, 15 A, bullet, flat rocker handle, E/M-trip		Occupies one position		
n/a	142883	CB, 20 A, bullet, flat rocker handle, E/M-trip		Occupies one position		
n/a	142884	CB, 25 A, bullet, flat rocker handle, E/M-trip		Occupies one position		
n/a	142885	CB, 30 A, bullet, flat rocker handle, E/M-trip		Occupies one position		
n/a	142886	CB, 35 A, bullet, flat rocker handle, E/M-trip		Occupies one position		
n/a	142887	CB, 40 A, bullet, flat rocker handle, E/M-trip		Occupies one position		
n/a	142888	CB, 45 A, bullet, flat rocker handle, E/M-trip		Occupies one position		
n/a	142889	CB, 50 A, bullet, flat rocker handle, E/M-trip		Occupies one position		
n/a	142890	CB, 60 A, bullet, flat rocker handle, E/M-trip		Occupies one position		
n/a	142891	CB, 70 A, bullet, flat rocker handle, E/M-trip		Occupies one position		
n/a	142892	CB, 75 A, bullet, flat rocker handle, E/M-trip		Occupies one position		

n/a	142901	CB, 80 A, bullet, flat rocker handle, E/M-trip	Occupies one position
n/a	142902	CB, 100 A, bullet, flat rocker handle, E/M-trip	Occupies one position, space required
n/a	142903	CB, 125 A, bullet, flat rocker handle, E/M-trip	Occupies two positions, space required
n/a	142904	CB, 150 A, bullet, flat rocker handle, E/M-trip	Occupies two positions, space required
n/a	142905	CB, 200 A, bullet, flat rocker handle, E/M-trip	Occupies two positions, space required
n/a	142906	CB, 250 A, bullet, flat rocker handle, E/M-trip	Occupies three positions, space required

#### Flat Rocker Handle Electrical Trip Alarm (White Handle) Bullet Breakers

n/a	142856	CB, 1 A, bullet, flat rocker handle, E-trip	Occupies one position
n/a	142857	CB, 3 A, bullet, flat rocker handle, E-trip	Occupies one position
n/a	142858	CB, 5 A, bullet, flat rocker handle, E-trip	Occupies one position
n/a	142859	CB, 10 A, bullet, flat rocker handle, E-trip	Occupies one position
n/a	142861	CB, 15 A, bullet, flat rocker handle, E-trip	Occupies one position
n/a	142862	CB, 20 A, bullet, flat rocker handle, E-trip	Occupies one position
n/a	142863	CB, 25 A, bullet, flat rocker handle, E-trip	Occupies one position
n/a	142864	CB, 30 A, bullet, flat rocker handle, E-trip	Occupies one position
n/a	142865	CB, 35 A, bullet, flat rocker handle, E-trip	Occupies one position
n/a	142866	CB, 40 A, bullet, flat rocker handle, E-trip	Occupies one position
n/a	142867	CB, 45 A, bullet, flat rocker handle, E-trip	Occupies one position
n/a	142868	CB, 50 A, bullet, flat rocker handle, E-trip	Occupies one position
n/a	142869	CB, 60 A, bullet, flat rocker handle, E-trip	Occupies one position
n/a	142870	CB, 70 A, bullet, flat rocker handle, E-trip	Occupies one position
n/a	142871	CB, 75 A, bullet, flat rocker handle, E-trip	Occupies one position
n/a	142872	CB, 80 A, bullet, flat rocker handle, E-trip	Occupies one position
n/a	142873	CB, 100 A, bullet, flat rocker handle, E-trip	Occupies one position, space required
n/a	142874	CB, 125 A, bullet, flat rocker handle, E-trip	Occupies two positions, space required
n/a	142875	CB, 150 A, bullet, flat rocker handle, E-trip	Occupies two positions, space required
n/a	142876	CB, 200 A, bullet, flat rocker handle, E-trip	Occupies two positions, space required
n/a	142877	CB, 250 A, bullet, flat rocker handle, E-trip	Occupies three positions, space required



#### Two-Pole and Three-Pole Bullet Breaker Lug Adapters



n/a	520989	Copper plate, two-pole adapter	Allows use of standard 1/4" D x 5/8" on center lugs
n/a	522786	Z-shaped lug adapter, two-pole	Allows use of standard 3/8" D x 1" on center lugs
n/a	534449	Kit, two-pole lug adapter	Allows use of standard 3/8" D x 1" on center lugs




n/a	514717	Copper plate, three-pole adapter	Allows use of two-pole (forked, 1/4" D x 5/8" on center) lugs
n/a	514714	Kit, three-pole lug adapter	Allows use of standard 3/8" D x 1" on center lugs





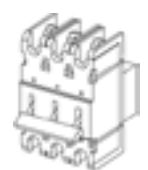
## Step 11b. Choose TLS/TPS Fuses with Bullet-Type Fuse Holders

LIST NUMBER	VERTIV PART NUMBER	DESCRIPTION	QTY.	NOTES	PICTORIAL
n/a	117201	Fuse holder, TLS/TPS, bullet type		Order one fuse holder per fuse	
n/a	248230900	Fuse, TLS/TPS, 3 amps		Occupies one position	
n/a	248231000	Fuse, TLS/TPS, 5 amps		Occupies one position	
n/a	248231200	Fuse, TLS/TPS, 6 amps		Occupies one position	
n/a	248231500	Fuse, TLS/TPS, 10 amps		Occupies one position	
n/a	248231800	Fuse, TLS/TPS, 15 amps		Occupies one position	
n/a	248232100	Fuse, TLS/TPS, 20 amps		Occupies one position	
n/a	248232400	Fuse, TLS/TPS, 25 amps		Occupies one position	
n/a	248232700	Fuse, TLS/TPS, 30 amps		Occupies one position	
n/a	248233300	Fuse, TLS/TPS, 40 amps		Occupies one position	
n/a	248233900	Fuse, TLS/TPS, 50 amps		Occupies one position	
n/a	248234200	Fuse, TLS/TPS, 60 amps		Occupies one position	
n/a	248234500	Fuse, TLS/TPS, 70 amps		Occupies one position	
n/a	118413	Fuse, TLS/TPS, 80 amps		Occupies one position	
n/a	118414	Fuse, TLS/TPS, 90 amps		Occupies one position	
n/a	118415	Fuse, TLS/TPS, 100 amps		Occupies one position	
n/a	139052	Fuse, TLS/TPS, 125 amps		Occupies one position	

## Step 11c. Choose GMT Fuses with GMT Fuse Module

LIST NUMBER	VERTIV PART NUMBER	DESCRIPTION	QTY.	NOTES	PICTORIAL
n/a	550224	Fuse module, six GMT fuse positions		Occupies two bullet positions	
n/a	248610301	Fuse, GMT, 18/100 amp		Occupies one position	
n/a	248610200	Fuse, GMT, 1/4 amp		Occupies one position	
n/a	248610300	Fuse, GMT, 1/2 amp		Occupies one position	
n/a	248610500	Fuse, GMT, 3/4 amp		Occupies one position	
n/a	248610700	Fuse, GMT, 1-1/3 amps		Occupies one position	
n/a	248610800	Fuse, GMT, 2 amps		Occupies one position	
n/a	248610900	Fuse, GMT, 3 amps		Occupies one position	
n/a	248611000	Fuse, GMT, 5 amps		Occupies one position	
n/a	248611300	Fuse, GMT, 7-1/2 amps		Occupies one position	
n/a	248611200	Fuse, GMT, 10 amps		Occupies one position	
n/a	248611500	Fuse, GMT, 15 amps		Occupies one position, space required	
n/a	102774	Replacement safety cover			
n/a	248872600	Replacement dummy fuse		Occupies one position	

## Step 11d. Choose GJ/218 Style Breakers and Breaker Mounting Kits

LIST NUMBER	VERTIV PART NUMBER	DESCRIPTION	QTY.	NOTES	PICTORIAL	
Electrical/Mechanical Trip Alarm (Black Handle) GJ/218 Style Breakers without Internal Shunt						
n/a	256621700	CB, 100 A, GJ/218 style, E/M-trip		Occupies one position		
n/a	256621600	CB, 125 A, GJ/218 style, E/M-trip		Occupies one position		
n/a	256621800	CB, 150 A, GJ/218 style, E/M-trip		Occupies one position		
n/a	256621900	CB, 175 A, GJ/218 style, E/M-trip		Occupies one position		
n/a	256622200	CB, 200 A, GJ/218 style, E/M-trip		Occupies one position		
n/a	256622900	CB, 225 A, GJ/218 style, E/M-trip		Occupies one position		
n/a	256623500	CB, 250 A, GJ/218 style, E/M-trip		Occupies one position		
n/a	256625300	CB, 300 A, GJ/218 style, E/M-trip		Occupies two positions		
n/a	256626200	CB, 400 A, GJ/218 style, E/M-trip		Occupies two positions		
n/a	256628200	CB, 600 A, GJ/218 style, E/M-trip		Occupies three positions		
n/a	121657	CB, 800 A, GJ/218 style, E/M-trip		Occupies four positions		

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## Electrical Trip Alarm (White Handle) GJ/218 Style Breakers without Internal Shunt

n/a	256621300	CB, 100 A, GJ/218 style, E-trip	Occupies one position
n/a	256621400	CB, 125 A, GJ/218 style, E-trip	Occupies one position
n/a	256622400	CB, 150 A, GJ/218 style, E-trip	Occupies one position
n/a	256622500	CB, 175 A, GJ/218 style, E-trip	Occupies one position
n/a	256622600	CB, 200 A, GJ/218 style, E-trip	Occupies one position
n/a	256622700	CB, 225 A, GJ/218 style, E-trip	Occupies one position
n/a	256623400	CB, 250 A, GJ/218 style, E-trip	Occupies one position
n/a	103572	CB, 300 A, GJ/218 style, E-trip	Occupies two positions
n/a	256626300	CB, 400 A, GJ/218 style, E-trip	Occupies two positions
n/a	103571	CB, 600 A, GJ/218 style, E-trip	Occupies three positions
n/a	121658	CB, 800 A, GJ/218 style, E-trip	Occupies four positions



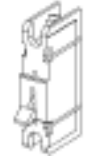
## Electrical/Mechanical Trip Alarm (Black Handle) GJ/218 Style Breakers with Internal Shunt

n/a	123580	CB, 100 A, GJ/218 style, E/M-trip, w/shunt	Occupies one position, 100 A/25 mV shunt
n/a	123631	CB, 125 A, GJ/218 style, E/M-trip, w/shunt	Occupies one position, 125 A/25 mV shunt
n/a	123632	CB, 150 A, GJ/218 style, E/M-trip, w/shunt	Occupies one position, 150 A/25 mV shunt
n/a	123633	CB, 175 A, GJ/218 style, E/M-trip, w/shunt	Occupies one position, 175 A/25 mV shunt
n/a	123634	CB, 200 A, GJ/218 style, E/M-trip, w/shunt	Occupies one position, 200 A/25 mV shunt
n/a	123635	CB, 225 A, GJ/218 style, E/M-trip, w/shunt	Occupies one position, 225 A/25 mV shunt
n/a	123636	CB, 250 A, GJ/218 style, E/M-trip, w/shunt	Occupies one position, 250 A/25 mV shunt
n/a	550250	CB, 300 A, GJ/218 style, E/M-trip, w/shunt	Occupies two positions, 300 A/25 mV shunt
n/a	550251	CB, 400 A, GJ/218 style, E/M-trip, w/shunt	Occupies two positions, 400 A/25 mV shunt
n/a	550252	CB, 600 A, GJ/218 style, E/M-trip, w/shunt	Occupies three positions, 600 A/25 mV shunt
n/a	#####	CB, 800 A, GJ/218 style, E/M-trip, w/shunt	Occupies four positions, 800 A/25 mV shunt



**Electrical Trip Alarm (White Handle) GJ/218 Style Breakers with Internal Shunt**

n/a	516184	CB, 100 A, GJ/218 style, E-trip, w/shunt	Occupies one position, 100 A/25 mV shunt
n/a	516187	CB, 125 A, GJ/218 style, E-trip, w/shunt	Occupies one position, 125 A/25 mV shunt
n/a	516185	CB, 150 A, GJ/218 style, E-trip, w/shunt	Occupies one position, 150 A/25 mV shunt
n/a	516186	CB, 175 A, GJ/218 style, E-trip, w/shunt	Occupies one position, 175 A/25 mV shunt
n/a	516188	CB, 200 A, GJ/218 style, E-trip, w/shunt	Occupies one position, 200 A/25 mV shunt
n/a	516189	CB, 225 A, GJ/218 style, E-trip, w/shunt	Occupies one position, 225 A/25 mV shunt
n/a	516190	CB, 250 A, GJ/218 style, E-trip, w/shunt	Occupies one position, 250 A/25 mV shunt
n/a	550253	CB, 300 A, GJ/218 style, E-trip, w/shunt	Occupies two positions, 300 A/25 mV shunt
n/a	550254	CB, 400 A, GJ/218 style, E-trip, w/shunt	Occupies two positions, 400 A/25 mV shunt
n/a	550255	CB, 600 A, GJ/218 style, E-trip, w/shunt	Occupies three positions, 600 A/25 mV shunt
n/a	550249	CB, 800 A, GJ/218 style, E-trip, w/shunt	Occupies four positions, 800 A/25 mV shunt



**GJ/218 Breaker Mounting Kits**

n/a	503787	Kit, GJ/218 breaker mounting, 1-pole, w/o shunt	Order one for each 1-pole GJ/218 CB w/o shunt
n/a	513961	Kit, GJ/218 breaker mounting, 2-pole, w/o shunt	Order one for each 2-pole GJ/218 CB w/o shunt
n/a	513957	Kit, GJ/218 breaker mounting, 3-pole, w/o shunt	Order one for each 3-pole GJ/218 CB w/o shunt
n/a	554091	Kit, GJ/218 breaker mounting, 4-pole, w/o shunt	Order one for each 4-pole GJ/218 CB w/o shunt
n/a	513731	Kit, GJ/218 breaker mounting, 1-pole, w/ shunt	Order one for each 1-pole GJ/218 CB w/ shunt
n/a	554092	Kit, GJ/218 breaker mounting, 2-pole, w/ shunt	Order one for each 2-pole GJ/218 CB w/ shunt
n/a	554093	Kit, GJ/218 breaker mounting, 3-pole, w/ shunt	Order one for each 3-pole GJ/218 CB w/ shunt
n/a	554094	Kit, GJ/218 breaker mounting, 4-pole, w/ shunt	Order one for each 4-pole GJ/218 CB w/ shunt

## Step 11e. Choose TPH Style Fuses

LIST NUMBER	VERTIV PART NUMBER	DESCRIPTION	QTY.	NOTES	PICTORIAL
n/a	119437	Fuse, TPH, 70 A			
n/a	119438	Fuse, TPH, 80 A			
n/a	119440	Fuse, TPH, 100 A			
n/a	119581	Fuse, TPH, 150 A			
n/a	119582	Fuse, TPH, 200 A			
n/a	119583	Fuse, TPH, 225 A			
n/a	119584	Fuse, TPH, 250 A			
n/a	119585	Fuse, TPH, 300 A			
n/a	119586	Fuse, TPH, 400 A			
n/a	119587	Fuse, TPH, 500 A			
n/a	119588	Fuse, TPH, 600 A			
n/a	A7000199	Fuse, TPH, 800 A			

**Step 11f. Choose TPL-B Style Fuses**

LIST NUMBER	VERTIV PART NUMBER	DESCRIPTION	QTY.	NOTES	PICTORIAL
n/a	248251500	Fuse, TPL-B, 70 A			
n/a	248252000	Fuse, TPL-B, 80 A			
n/a	248252600	Fuse, TPL-B, 100 A			
n/a	248253300	Fuse, TPL-B, 150 A			
n/a	248254000	Fuse, TPL-B, 200 A			
n/a	248254500	Fuse, TPL-B, 225 A			
n/a	248255000	Fuse, TPL-B, 250 A			

**Step 11g. Optional - Choose Hardware Kits**

LIST NUMBER	VERTIV PART NUMBER	DESCRIPTION	QTY.	NOTES
n/a	541084	Hardware kit, 1/4", (32) nuts, locks, flats		Accommodates (8) bullet positions
n/a	548184	Hardware kit, 3/8", (16) bolts, locks, flats		Accommodates (4) GJ/218 positions
n/a	548185	Hardware kit, 3/8", (16) nuts, locks, flats		Accommodates (4) TPH or TPL-B positions

**Step 12. Optional - Choose Battery Shunt**

Select one, quantity of one, if desired. Note restrictions.

LIST NUMBER	VERTIV PART NUMBER	DESCRIPTION	QTY.	NOTES
List 90	58112700090	Battery shunt, 800 A		For use with List 21 only
List 91	58112700091	Battery shunt, 2000 A		For use with List 22 only
List 92	58112700092	Battery shunt, 2500 A		For use with Lists 23 and 24 only

**Step 13. Optional - Choose Battery Contactor for Manual and/or Low Voltage Battery Disconnect**

Select one, quantity of one, if desired. Note restrictions.

LIST NUMBER	VERTIV PART NUMBER	DESCRIPTION	QTY.	NOTES
List CA	581127000CA	Battery contactor, 600 A		For use with List 21 only. Must be used with List LB or MB or both.
List CB	581127000CB	Battery contactor, 1200 A		For use with List 22, 23 or 24 only. Must be used with List LB or MB or both.
List CC	581127000CC	Battery contactor, 2000 A		For use with List 22, 23 or 24 only. Must be used with List LB or MB or both.



### Step 13a. Optional - Choose Low Voltage Battery Disconnect

Select one, quantity of one, if desired. Note restrictions.

LIST NUMBER	VERTIV PART NUMBER	DESCRIPTION	QTY.	NOTES
List LB	581127000LB	Low voltage battery disconnect		System must have List CA, CB or CC




### Step 13b. Optional - Choose Manual Battery Disconnect

Select one, quantity of one, if desired. Note restrictions.

LIST NUMBER	VERTIV PART NUMBER	DESCRIPTION	QTY.	NOTES
List MB	581127000MB	Manual battery disconnect switch		System must have List CA, CB or CC


### Step 14. Optional - Choose Battery Tray(s)

Select quantity and vertical rack spacing as desired and as relay rack space allows.

LIST NUMBER	VERTIV PART NUMBER	DESCRIPTION	QTY.	RACK SPACE	NOTES	PICTORIAL
List 93	58112700093	Battery tray, pre-cabled		6 RU, 7 RU or 8 RU	Provides a battery tray factory mounted in the relay rack specified when ordered. Each battery tray holds four (4) 12V front terminal valve regulated lead acid (VRLA) batteries. Battery cabling is factory provided and connected to the system's main busbars. Batteries are configured as two (2) 24 V strings per tray. Spacing is automatically set if battery manufacturer and part number is identified.	
n/a	555478	Battery termination bus kit		n/a	Termination bus bar assembly for battery cables, automatically added to system when one or more List 93 is ordered with List 22, 23 or 24.	
n/a	553584	Battery termination bus kit		n/a	Termination bus bar assembly for battery cables, automatically added to system when one or more List 93 is ordered with List 21.	

## Step 14a. Optional - Choose Battery Front Cover

Select based on tray spacing, if desired.

LIST NUMBER	VERTIV PART NUMBER	DESCRIPTION	QTY.	RACK SPACE	NOTES	PICTORIAL
n/a	548022	Cover, front, battery tray		6 RU	Provides a front battery cover to the List 93 battery tray	
n/a	548021	Cover, front, battery tray		7 RU	Provides a front battery cover to the List 93 battery tray	
n/a	548020	Cover, front, battery tray		8 RU	Provides a front battery cover to the List 93 battery tray	


## Step 14b. Optional - Choose Battery Tray Disconnect Breakers

Select rating at quantity twice that of List 93, if desired.

LIST NUMBER	VERTIV PART NUMBER	DESCRIPTION	QTY.	NOTES
n/a	256694300	Breaker, 50 A, E/M-trip alarm		Requires 528500 and 528501 housing kit
n/a	256694700	Breaker, 60 A, E/M-trip alarm		Requires 528500 and 528501 housing kit
n/a	256695100	Breaker, 70 A, E/M-trip alarm		Requires 528500 and 528501 housing kit
n/a	256695500	Breaker, 75 A, E/M-trip alarm		Requires 528500 and 528501 housing kit
n/a	256695900	Breaker, 100 A, E/M-trip alarm		Requires 528500 and 528501 housing kit
n/a	100765	Breaker, 125 A, E/M-trip alarm		Requires 528502 and 528503 housing kit
n/a	100763	Breaker, 150 A, E/M-trip alarm		Requires 528502 and 528503 housing kit
n/a	121810	Breaker, 200 A, E/M-trip alarm		Requires 528502 and 528503 housing kit

## Step 14c. Optional - Choose Housing Kit for Battery Disconnect Breakers

Select kit by breaker size. Each tray requires one left side and one right side kit. Required if battery disconnect breakers are selected.

LIST NUMBER	VERTIV PART NUMBER	DESCRIPTION	QTY.	NOTES	PICTORIAL
n/a	528500	Breaker housing kit, 1-pole, right side		Mounts on right side of battery tray. Accommodates breakers 50 A to 100 A.	
n/a	528501	Breaker housing kit, 1-pole, left side		Mounts on left side of battery tray. Accommodates breakers 50 A to 100 A.	

n/a	528502	Breaker housing kit, 2-pole, right side		Mounts on right side of battery tray. Accommodates breakers 125 A to 200 A.
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n/a	528503	Breaker housing kit, 2-pole, left side		Mounts on left side of battery tray. Accommodates breakers 125 A to 200 A.
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## Step 15. Order Accessories and Spare Parts

LIST NUMBER	VERTIV PART NUMBER	DESCRIPTION	QTY.	RACK SPACE	NOTES
31	58112700031	Rectifier mounting shelf field expansion kit		2 RU	Order as required for field expansion rectifier shelf, maximum of one per system.
n/a	554020	System interface circuit card		n/a	Replacement/spare part
n/a	MA4C5U31	IB2 interface circuit card		n/a	Replacement/spare part
n/a	548120	EIB interface circuit card		n/a	Replacement/spare part
n/a	548078	SMDU+ interface circuit card		n/a	Replacement/spare part
n/a	540972	LVD driver circuit card, main bay		n/a	Replacement/spare part
n/a	547873	LVD driver lite circuit card, main bay		n/a	Replacement/spare part
n/a	540973	Manual battery disconnect circuit card		n/a	Replacement/spare part



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