Compact Power Line Shelves

Ordering Guide – Models: J85480S1 and J2007001

The CPL family of shelves is 1U (1.75") high, mounts in 19-inch wide frames and provides up to 11kW of 48V output power per shelf. There are two types of shelves. Model **J85480S1** has three or four slots for rectifiers, converters (PEMs), CP843A Pulsar controller with display or distribution modules. Model **J2007001** is similar with four slots for rectifiers or distribution, and also includes space for a CP841A Pulsar Edge controller without sacrificing a slot.

Model J85480S1

- Only 16.81" wide fits inside equipment that is designed into a 19" rack

- Two DC Outputs may be common or split. Each output bus is rated for 100A with two-hole lug landings for 2 AWG wire.

- Choose between IEC-320 or AMP Mate_N_Lok for AC input connections.

- Select between analog, RS485 or dual/redundant I^2C communications.

- Adjustable mounting ears for either flush front or multiple set back positions.

- Some shelves are stackable up to 8 high with 32 paralleled power supplies.

- Optional Plug-N-Play CP843A controller w/display & interactive panel

Model J2007001

- 17.375" wide fits into a 19" rack

- Single DC output rated for 200A with two-hole lug landings for up to 2/0 AWG cable.

- Choose between IEC-320 or Molex Mini-Fit SR for AC input connections. Single, dual or quad input feeds

- RS485 communications.

- Adjustable mounting ears with multiple set back positions.

- Up to 3 shelves may be interconnected with bus straps for DC outputs for a 600A system

- Plug-N-Play CP841A controller with front access craft port, rear access LAN and alarm connections

- Select Shelves include Distribution Modules

J85480S1 Shelves

List	Max Power	# AC Inputs	AC Input Plug	DC Output Bus	Max Rectifier Size	Communications Features	
						Shelf Controller	Protocol
1	8kW	4	IEC-320, C13	Common	CP2000	CP843A	Analog, I^{2}C RS485
4	8kW		IEC-320, C13	Common		No	
6	8kW		AMP Mate_N_Lok	Common			
7	11kW		AMP Mate_N_Lok	Split	CP2725		Analog. I^{2}C
9	8kW		IEC-320, C13	Split	CP2000		Analog. I^{2}C
List	**Capacity**	**# DC Inputs**	**DC Input Plug**	**DC Output Bus**	**Max PEM Size**	**Communications Features**	
						Controller	Protocol
14	8kW	2	AMP Power-Blade	Split	CP2000	No	Analog, I^{2}C

Notes:

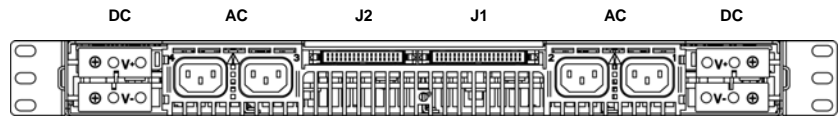List 1 shelf allows side access to CP843A Pulsar Controller Outputs

Split Bus Shelves cannot be paralleled together. Up to 8 Common Bus Shelves may be connected together.
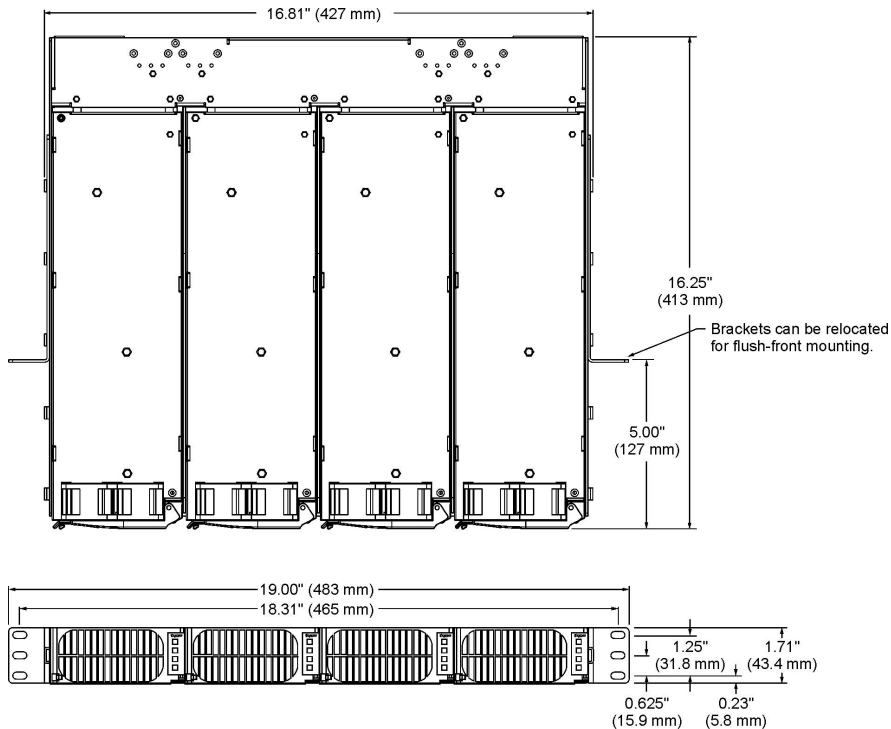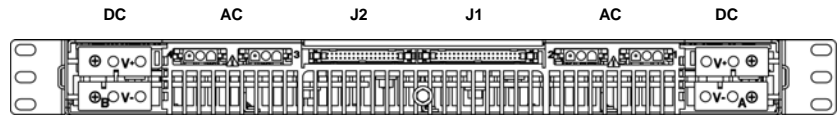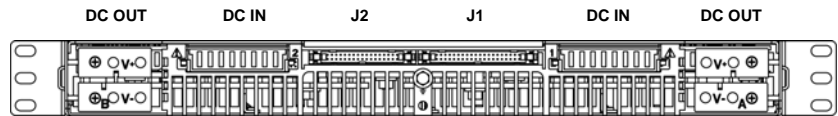
J85480S1 Shelves (Continued)

Rear Views
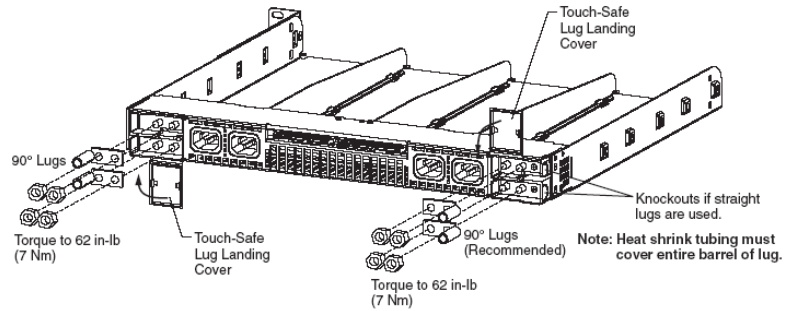
Lists 1, 4, 9

Lists 6, 7


Lists 14

DC Output Connections

- Each Output Bus is rated for 100A and up to 2 gage two-hole lugs.

- M6 nuts with conical washers provided.

- Touch-Safe plastic covers around output buses.

DC Split Output Bus Option

- Split Vout (-) buses on either side of the shelf. Vout (+) is common to both sections.

- Common I^2C communications. +5V bias maintains communications even during a feeder fault. Each bus may be independently controlled

- Multiple shelves may not be paralleled together.
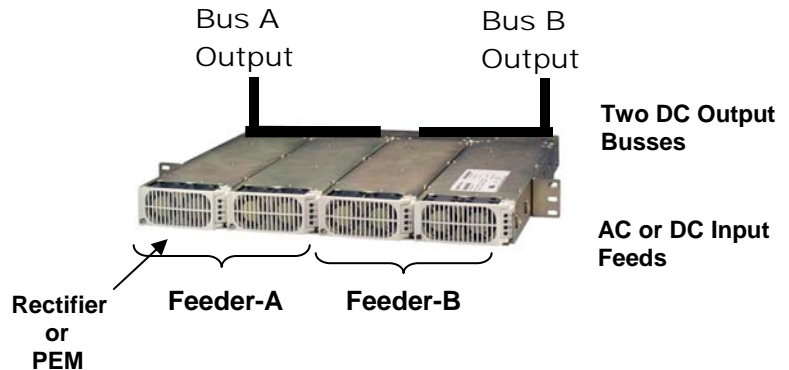
J85480S1 Shelves (Continued)

Controller Options

- NE843G is a standalone 1U high Pulsar Controller for use with J85480S1 CP shelves

- CP843A installs in slot 1 of a J85480S1 List 1 shelf. Connections to the controller are made on the left side as shown.

- CP843A controller comes with wireset that plugs into J1 connector enabling the controller.


Controllerless Operation

- Lists 4 and 6 ship with a jumper 881545-2 installed on connector J1 pins 21 and 23. This allows the shelf to be powered without a controller. Remove this jumper if controller cable installed.

- CP843A controller ships with cc848838284 connector that plugs into J1 on a List 1 shelf activating the controller.

- Lists 7, 9 and 14 require cc848836107 connector be installed in J1 to allow the shelf to power up without a controller.
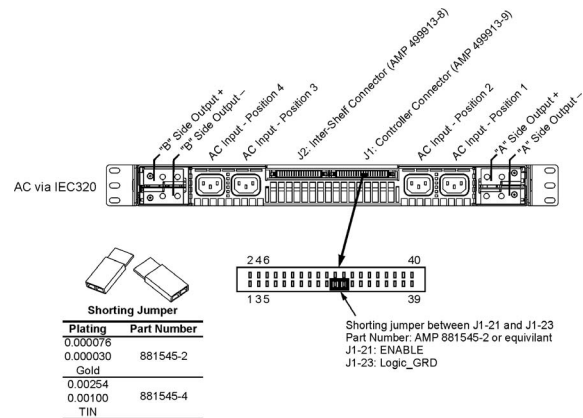
Communication Signals
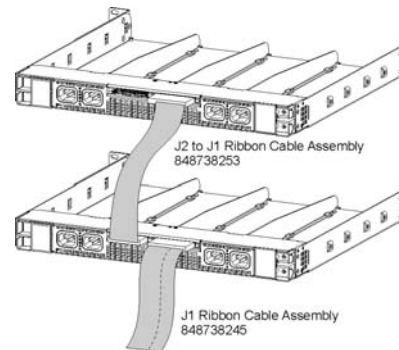
J1 – Controller Cable Connection:
848738245 ribbon cable is for Lists 1, 4, 6.
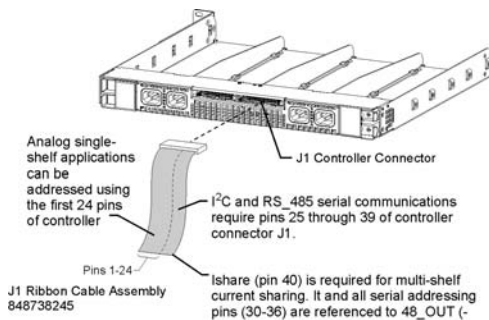
J2 – Multi-shelf Connection:
848738253 ribbon cable is for List 1, 4, 6. Lists 7, 9, 14 are split bus shelves that cannot be daisy chained together.

J2007001 Shelves (AC Input, DC Output)

List	Max Power	Slots/Feeds	AC Input Plug	DC Output Bus	Max Rect Size	Communications Features	
						Controller	Protocol
2	8.4kW	3 / 3	Molex Mini-Fit Sr	Common	CP2725	CP841A	RS485
4	11kW	4 / 4	Molex Mini-Fit Sr				
5	11kW	4 / 2	Molex Mini-Fit Sr				
6	11kW	4 / 4	IEC-320, C19				

Notes:

CP841A Edge Controller ships separately.

Up to 3 Shelves may be Interconnected.

List 2 Shelf includes a 100A DC distribution module with Latching LVBD, two 30A circuit breakers and four GMT fuse positions.
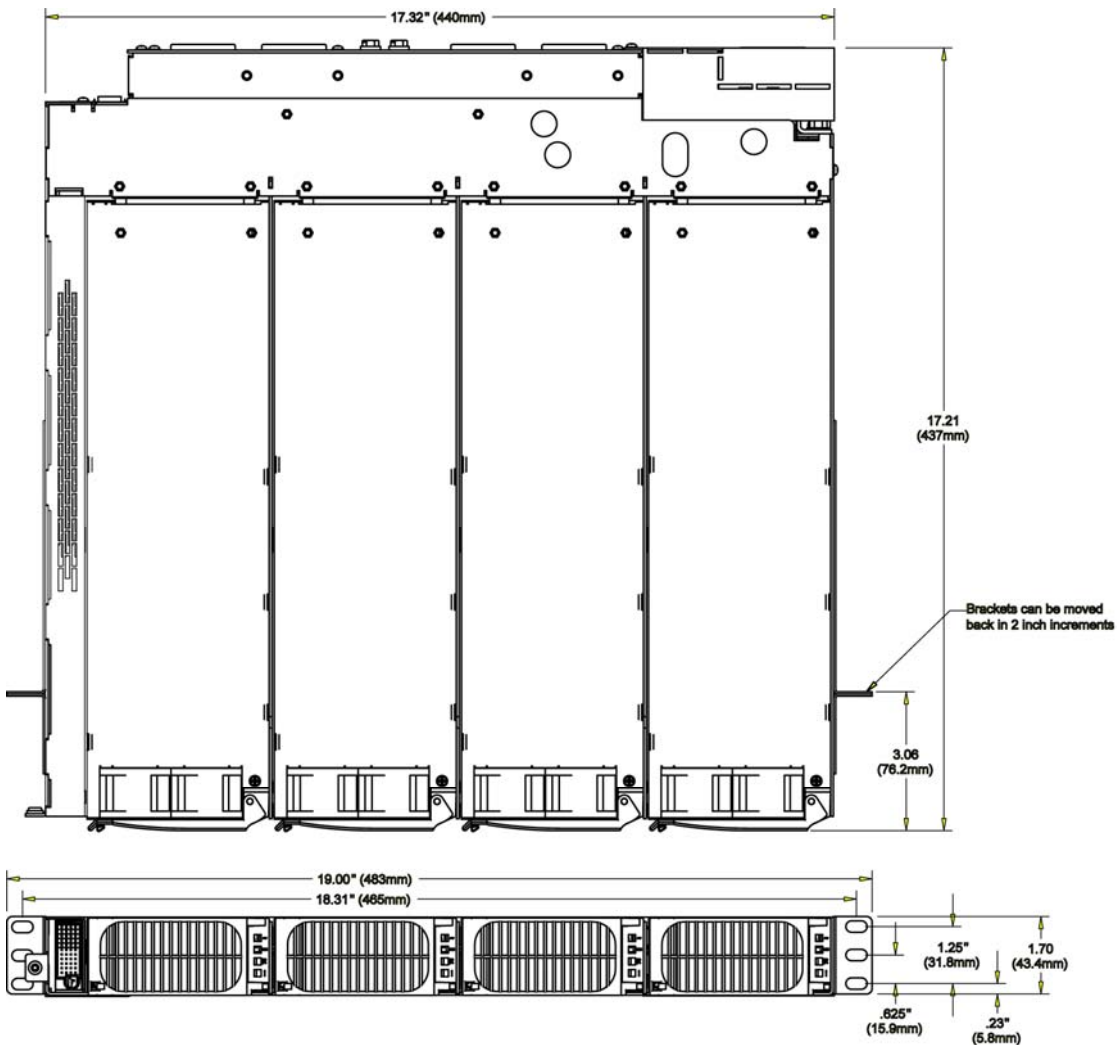
J2007001 Shelves (Continued)
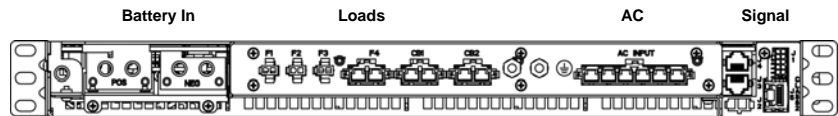
Rear Views

List 2

- F1, F2 and F3: Molex 39-01-2028 housing with 44476-3111 16awg contact or 44476-1111 18-24awg contacts

- F4, CB1 and CB2: Molex 42816-0212 housing with 42815-0011 10-12awg contact

- AC Input: 42816-0612 housing with 42815-0011 10-12awg contact

- Battery Input Bus is rated for 100A and up to 2/0 gage two-hole lugs for ¼-20 studs on 5/8" centers.
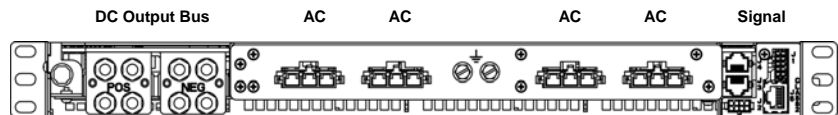
Front View

| Controller | Slot 1 | Slot 2 | Slot 3 | GMTs | Breaker |

Rear View

| Battery In | Loads | AC | Signal |
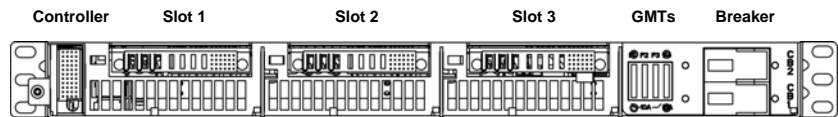
List 4

- AC Input: 42816-0312 housing with 42815-0031 10-12awg contact or 42815-0031 8awg contact.

- DC Output Bus is rated for 200A for two 2 gage or one 2/0 gage two-hole lugs (¼-20 studs on 5/8" centers).

Rear View

| DC Output Bus | AC | AC | AC | AC | Signal |

List 5

- AC Input: 42816-0312 housing with 42815-0031 10-12awg contact or 42815-0031 8awg contact. Each Input feeds two rectifiers.

- DC Output Bus is rated for 200A for two 2 gage or one 2/0 gage two-hole lugs (¼-20 studs on 5/8" centers).

Rear View

| DC Output Bus | AC | AC | Signal |

List 6

- AC Input: IEC-320 C19 AC receptacles

- DC Output Bus is rated for 200A for two 2 gage or one 2/0 gage two-hole lugs (¼-20 studs on 5/8" centers).

Rear View

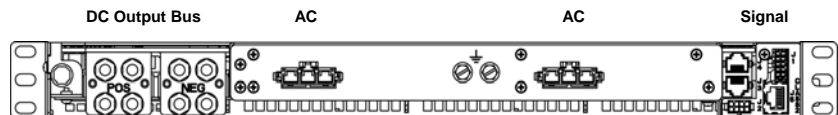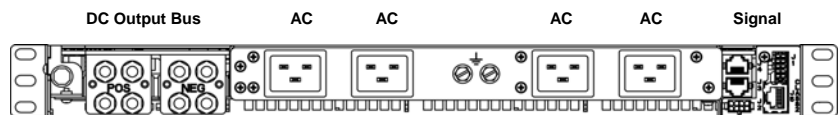| DC Output Bus | AC | AC | AC | AC | Signal |

J2007001 Shelves (Continued)

Controller Options

Several versions of the CP841A Pulsar Edge controller are available. They offer different alarm input/outputs on the J1 Connector of the shelf:

- **CP841A_9C0R**: 9 Alarm inputs with a common return
  No Alarm Output Relays

- **CP841A_3C3R**: 3 Alarm inputs with a common return
  3 Output Relays (Pwr Maj, Pwr Mnr, 1 Selectable)

- **CP841A_0I5R**: 5 Output Relays (Pwr Maj, Pwr Mnr, 3 Selectable)
  No Alarm Inputs
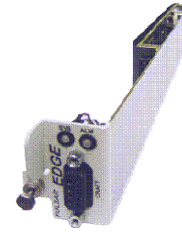
CP841A has a DB9 craft port on the front of the unit.

Communication Signals

- J1 provides certain alarm outputs and inputs depending on the controller. Inputs are "Dry", no voltage, contact Closures or Opens to a common return. Outputs are Relays. These Alarms are customer selectable on the controllers web pages.

- J2 provides additional alarm inputs on shelves with equipped with distribution or distribution control connections (LVD, Shunt, FAJ) for shelves with external distribution panel. Alarm inputs are contact Closures or Opens to the non-grounded side of the dc bus [-48V]. -48V is provided for these alarm inputs.

- J3, J4 Battery Thermal Probe (QS873A) or Battery Mid-String Voltage Monitor (ES771) with battery thermal probe or Shelf-to-Shelf Daisy Chain Cable.

- J5 LAN/Ethernet
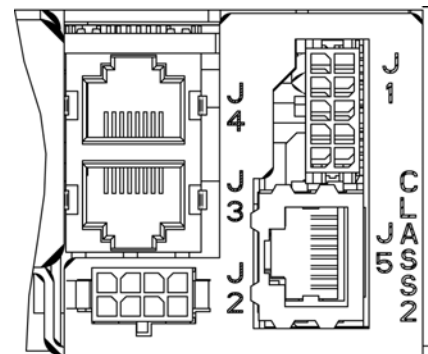
Specifications

Rectifiers/Converters

Power Module	Output Power/ Input Voltage	Output Voltage	AC Protection	Physical
CP1800AC52	1800W / 200-240VAC	Hardware set 44 - 58Vdc	15A Breaker, 14 Gauge Wire	L: 13.85"/351.8mm
	1200W / 100-120VAC			W: 4.00"/101.6mm
CP2000AC54PE CP2000AC54PEZ	2000W / 200-240VAC			H: 1.66"/42.2mm
	1200W / 100-120VAC			W: 4.6lb/2.1kg
CP2000AC54SD	2000W / 200-240VAC			
CP2725AC54Z	2725W / 200-240VAC	Software set 42 – 58Vdc	20A Breaker, 12 Gauge Wire	
	1200W / 100-120VAC			
CP2000DC54-PE	2000W / 40-72VDC		60A Breaker, 8 Gauge wire	

Note: PE suffix denotes PoE Compliance. Z suffix denotes RoHS 6 Compliance

Shelves
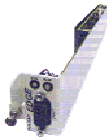
Mechanical	J85480S-1	J2007001
Height	1.71inches/43.4mm	1.71 inches/43.4mm
Width (with mounting ears)	19 inches/483mm	19 inches/483mm
Depth	16.25 inches/413mm	17.06 inches/433mm
Weight (without rectifiers)	9.25lbs/4.2kg	8.75lbs/4.0kg
Environmental		
Operating Temperature Range	*Lists 1,4,9*: -40°C to 25°C (Commercial 60°C c13 AC Cord) -40°C to 55°C (High Temp c13 AC Cord) *Lists 6,7,14*: -40°C to 75°C	*Lists,6*: -40°C to 25°C (Commercial 60°C c19 AC Cord) -40°C to 55°C (High Temp c19 AC Cord) *List 2*: -40°C to 55°C *Lists 4,5*: -40°C to 75°C
Operating Relative Humidity	0 - 95% (non-condensing)	
Storage Temperature Range	-40°C to 85°C	
EMC	FCC, EN 55022, CISPR22, Level A, conducted and radiated	
Immunity	FCC and CISPR22 (EN55022) Class A2	
Safety/Standards Compliance		
Safety Standards	*U*L1950, EN60950 (IEC950), *CSA**234/950	
Certification Marks	*Lists 6,7,14*: VDE, *UL* Recognized (Canada and U.S.) *Lists 1,4,9*: VDE, *UL Listed* (Canada and U.S.)	*Lists 2,4,5*: VDE, *UL* Recognized (Canada and U.S.) *Lists 6*: VDE, *UL Listed* (Canada and U.S.)

Ordering Information

	Description	Comcode	Availability	Photo
J85480S1 Rectifier Shelves				
List 1	Rectifier Shelf, C13 AC Input, Common DC Output	CC109143723	CALL	
List 4	Rectifier Shelf, C13 AC Input, Common DC Output	108994538	GA	
List 6	Rectifier Shelf, Amp AC Input, Common DC Output	CC109104378	GA	
List 7	Rectifier Shelf, Amp AC Input, Split DC Output	CC109121902	GA	
List 9	Rectifier Shelf, C13 AC Input, Split DC Output	CC109137072	GA	
List 14	PEM Converter Shelf, Amp DC Input, Split DC Output	CC109124764	GA	
J2007001 Rectifier Shelves				
List 2	Rectifier Shelf, Molex Mini-Fit SR AC Input, 100A DC Distribution Module, Latching LVBD, Two 30A Breakers, Four GMT Fuses.	CC109140035	Q408	
List 4	Rectifier Shelf, Molex Mini-Fit SR AC Input per Rectifier	CC109140043	Q408	
List 5	Rectifier Shelf, Molex Mini-Fit SR AC Input per pair of Rectifiers	CC109140051	Q408	
List 6	Rectifier Shelf, C19 AC Input per Rectifier	CC109140027	Q408	
Rectifiers/PEM				
CP1800AC52	1800 Watt Rectifier	108994546	GA	
CP2000AC54PE	2000 Watt Rectifier (PoE)	CC109120722	GA	
CP2000AC54PEZ	2000 Watt Rectifier (PoE) (RoHS 6)	CC109139408	GA	
CP2000AC54SD	2000 Watt Rectifier (Hi-Line Only)	CC109139928	GA	
CP2725AC54Z	2725 Watt Rectifier (RoHS 6)	CC109142873	Q308	
CP2000DC54-PE	PEM (PoE)	CC109146692	Q308	
Blank Slot Fillers				
Central Office White		CC848822263	GA	
Raven Black		CC848781534	GA	
Graphite		CC848825233	GA	
Extensions for mounting into 23" cabinets				
1U high extension bracket kit (includes two brackets and mounting hardware)		CC848844803	GA	
2U high extension bracket kit (includes two brackets and mounting hardware)		848683009	GA	

Ordering Information (continued)

J85480S1 Shelf Material

Description	Comcode	Availability	Used ON
Cables for J85480S1 Shelves			
Communication Ribbon cable for attaching a controller to shelf – 10 ft	848738245	GA	Lists 1,4,6
Communication Ribbon cable for daisy-chaining between shelves – 9 in	848738253	GA	Lists 1,4,6
Communication Connector for J1 allows controllerless operation.	CC848836107	GA	Lists 7,9,14
DC output cable set: 10 AWG, 10 ft (1 RED and 1 BLACK cable)	848748987	GA	All
DC input cable: 10 AWG, 4ft, other end not terminated	CC848794908	GA	List 14
AC input cable: IEC 320, C13 (high temp) straight plug, 5-15P plug, 14 AWG, 10 ft	CC848776105	GA	Lists 1,4,9
AC input cable: IEC 320, C13 (high temp) straight plug, blunt cut, 14 AWG, 14 ft	847861192	GA	Lists 1,4,9
AC input cable: AMP 3-pin Mate-N-Lok, 14 AWG, 3 ft, other end blunt cut	CC848763301	GA	Lists 6,7
AC input cable: AMP 3-pin Mate-N-Lok, 14 AWG, 10 ft, other end blunt cut	CC848793026	GA	Lists 6,7
Pulsar Controllers for J85480S1 Shelves			**Photo**
NE843G 1U standalone Controller (Display, DB9 craft port and RJ45 Ethernet)	CC109139358	GA	
CP843A CP Shelf Mounted Controller (Display and RJ45 Ethernet)	CC109129895	CALL	
Cables for Pulsar Controllers			
NE843G to CP Shelf Cable Kit (Includes 2ft power and communication cable)	CC109144820	GA	
Alarm Output Cable to J4 50ft – 24ga solid twisted pair	CC848817635	GA	
Alarm Output Cable to J4 150ft – 24ga solid twisted pair	CC848817643	GA	
Alarm Input Cable to J3 50ft – 24ga Stranded	CC848817651	GA	
Alarm Input Cable to J3 150ft – 24ga Stranded	CC848817668	GA	

J2007001 Shelf Material

Description	Comcode	Availability	Photo
Pulsar Edge Controllers for J2007001 Shelves			
CP841A_9C0R Edge Controller (J1 has 9 Alarm inputs with a common return)	CC109140068	Q308	
CP841A_3C3R Edge Controller (J1 has 3 Alarm inputs with a common return and 3 output relays)	CC109145331	Q308	
CP841A_0I5R Edge Controller (J1 has 0 Alarm inputs and 5 output relays)	CC109145356	CALL	
Cover for Controller Slot on Supplemental Shelves	CC848847871	Q308	
Cables for Pulsar Edge Controllers			
Alarm Cable to J1 50ft – 24ga Stranded	CC848817651	GA	
Alarm Cable to J1 150ft – 24ga Stranded	CC848817668	GA	
AC input cable: IEC 320, C19 (high temp) straight plug, other end blunt cut, 12 AWG, 8 ft	CC848847368	GA	
AC input cable: Molex Mini-Fit Sr plug, other end blunt cut, 8 AWG, 10 ft (2 cables provided with comcode. Order one for List 5 shelf and 2 for List 4 shelf)	848710711	GA	
Communication Cable for daisy-chaining between shelves J3-J4	CC848847780	GA	
Bus Bar Strap for Inter-connecting two Shelves	CC848844324	GA	

Product Documentation (These documents are available upon request)

Data Sheets: CPL Rectifiers, converters (PEMs) and Shelves
Application Notes: application guidelines, CPL platform, interfacing the CP power supplies, interface board & GUI setup, functional verification and debugging,
Protocol specifications: i^2c, RS485

Customer Service Contacts

For customers in the United States, Canada, Puerto Rico, and the US Virgin Islands, call 1-800-THE-1PWR (1-800-843-1797). This number is staffed from 7:00 am to 5:00 pm Central Time (zone 6), Monday through Friday, on normal business days. At other times this number contacts an answering service with on-call personnel for out of service emergencies. Services provided through this contact include initiating the spare parts procurement process, ordering documents, product warranty administration, and providing other product and service information.

Customer Training

Lineage Power offers customer training on many Power Systems products. For information call 1-972-284-2163. This number is answered from 8:00 a.m. until 4:30 p.m., Central Time Zone (Zone 6), Monday through Friday.

Downloads and Software

To download the latest product information visit our web site at http://www.lineagepower.com/

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