

GE
Critical Power

DAS Program

Product Selection Guide



Solutions Included in the Guide

The DAS Program selection guide has been created for ease of access to the primary products utilized by telecom providers on a daily basis. For products not featured in the guide, please contact a GE representative.

Power Express Class 2 Distribution



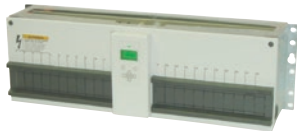
DC-DC Up-Converter



Slimline Power System (SPS)



Micro-BDFB / SPDU



5067 Mini-BDFB



Infinity M Power System



Infinity S Power System



RBA72 Power & Battery Cabinets



GPS4827 Power System





Power Express

Class 2 Distribution

The GE Power Express Class 2 Distribution is a 1RU shelf that provides 32 100VA limited circuits for safe powering of remote loads. NEC Class 2 rating allows for power cabling to be deployed in data cable raceway instead of conduit thus reducing labor time and increasing speed to market. The GE Power Express Class 2 Distribution incorporates 4 replaceable plug-in-play modules that generate 8 100VA circuits each. Each circuit is internally fused within the module eliminating the possibility of users plugging an incorrect rated fuse. This guarantees that each circuit maintains compliance to the tested Class 2 safety rating under UL. Each shelf is designed to support an alarm card for stand-alone deployment and can be uplinked over the RS-485 data bus through the RJ-45 connections on the rear of the shelf. This uplink allows each shelf to interface a GE Pulsar Plus controller (commonly used in our Infinity Power Systems) allowing local access, alarming and control of each circuit in every shelf as well as remote interface over the controller LAN connection.

Feature and Benefits

- Delivers NEC Class 2 Circuit
- 1U height, minimized depth
- No Pluggable Fuses
- Four 8-port modules per shelf
- Front panel LED indicators
- Alarm relay
- Flush or Mid Mount
- Push Button Operates each circuit
- Uplink to Pulsar Plus Controller
- Fast and Easy circuit terminations speed deployment
- Individual circuit on/off/reset
- Replace modules without re-wiring the shelf
- Simple push button operation
- Guaranteed Class 2 delivery with internal fusing (higher rated fuses cannot be installed thereby violating the class 2 performance)

CP Shelf DC-DC Converter Solution

When line powering over Class 2 power circuits, the voltage input from the associated battery power plant can present limited reach capabilities under discharge conditions. The CP DC-DC converter shelf can be used to extend the reach of Class 2 power circuits by taking the battery plant voltage and regulating it to -57Vdc. By maintaining the voltage at -57Vdc, the effective reach is doubled when compared to the voltage under discharge conditions.

Who We Are:

GE's Critical Power business provides mission-critical customers such as data centers, healthcare facilities and telecommunication networks with end-to-end product and service solutions to ensure power quality and maintain uptime to crucial equipment during power disturbances and outages.

What We Do:

GE's Critical Power business offers a single power solution provider, from design to installation to after-market services, to meet increasing demands for reliable, uninterrupted power.

- Power Switching
- Uninterrupted Power Supplies (UPS)
- DC Energy Systems
- Embedded Power

Why We Are Different:

GE's Critical Power business ensures the industry's best customer experience built on a foundation of world-class operations.

Power Express 8-Port Module Specifications



Input	
Voltage Range	-42Vdc to -60Vdc
Input Current	20A per module (80A per shelf) at -40Vdc
Output Circuits	
Automatic Power Limit	100VA per circuit (98VA minimum tolerance)
Voltage Range	-42Vdc to -60Vdc
Max Current	2.38 Max at -42Vdc
Control and Monitoring	
Visual Status Indicators	OK, Alarm on Alarm Card OK and Circuit Status on 8 port Module
Serial Interface	Half duplex RS485 (GP Protocol)

Environmental	
Operating Temperature	-40°C to +65°C
Storage Temperature	-40°C to +85°C
Humidity	< 95% non-condensing
Altitude	4000M max
Heat Dissipation	57 BTU per module (227 BTU Max per shelf)

Connections	
Input	2-hole ¼" on 5/8 centers (Up to 2 AWG Cable)
Output	32 pairs of terminal strip for 24AWG to 8AWG wires
Data	Two RJ-45 connections for uplink to Pulsar Plus controller

Mechanical		
	Shelf	Module
Length (inch/mm)	11.25" (286mm)	7.625" (194mm)
Width (inch/mm)	17.5" (445mm) (19" Rack Mount)	3.44" (88mm)
Height (inch/mm)	1.75" (44.5mm) (1RU)	1.72" (44mm)
Weight (lb/Kg)	6.5 lbs (2.95kg)	0.8 lbs (.363kg)

Safety and Standards Compliance	
NEBS	Evaluation by independent NRTL test lab to Telcordia GR63, Issue 4 & GR 1089, Issue 6
Safety	UL 60950-1, Recognized CSA C22.2 No. 60950-1-04
RoHS	Compliant to RoHS EU Directive 2002/95/EC
EMC	FCC-CFR, Part 15, sub-part B Class B with shelf; GR1089 Class A
ESD	EN61000-4-2, Level 4

DC-DC Up-Converter CP2500DC54-PEZ Specifications



Input	
Voltage Range	-40Vdc to -72Vdc
Input Current	75A dc max
Inrush Current	100A dc max
Holdup Time	6ms

Output	
Voltage Default	54Vdc
Voltage Adjust Range	44 - 58 Vdc
Rated Output Current	0.1 to 46.3A
Rated Output Power	2500W
Ripple (5Hz to 20MHz) -RMS -Peak to Peak	250mVrms 500mVpk-pk
Over Voltage Protection -Delayed -Immediate	60Vdc 65Vdc
Over Temperature -Warning -Shutdown	5C 20C

General	
Cooling	Internal variable speed fan cooled
Heat Dissipation	220W / 751 BTU

Environmental	
Operating Temperature	-40°C ¹ to +75°C (-40°F to 167°F)
Storage Temperature	-40°C to +85°C (-40°F to 185°F)
Power De-Rating	> +55°C (derates @ 2% per °C)
Relative Humidity	95% max, non-condensing
Altitude	4,000m max (13,000 ft)
Audible Noise	55dBA, typical

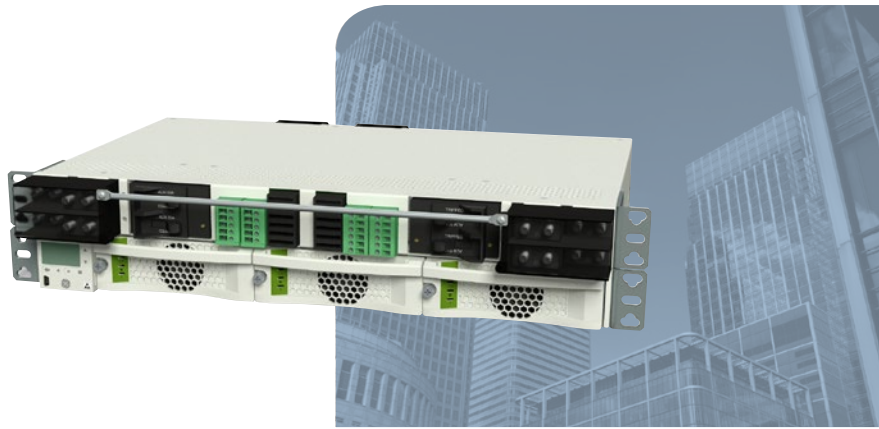
Mechanical		
	Shelf	Module
Length (inch/mm)	17.06" (433mm)	13.85" (351.2mm)
Width (inch/mm)	17.5" (445mm) (19" Rack Mount)	4" (101.6mm)
Height (inch/mm)	1.75" (44.5mm) (1RU)	1.63" (41.4mm)
Weight (lb/Kg)	8.75 lbs (4.0kg)	5 lbs (2.27kg)

Safety and Standards Compliance	
Zone 4	Per Telcordia GR-63-CORE, all floors when installed in CPL shelf
Safety	CE mark to Low Voltage Directive 2006/95/EC UL 609501-1 Recognized CAN/CSA C22.2 No. 60950-1-04 Certified VDE 0805-1 Licensed to IEC60950-1
RoHS	Compliant to RoHS EU Directive 2002/95/EC
EMC	FCC and CISPR22 (EN 55022) Class A
ESD	EN/IEC 61000-4-2 Level 3

Ordering Information

Power Express	
Ordering Code	Description
150031971	Power Express Starter Shelf Kit (Shelf and Alarm Module)
150027362	Power Express 8 port Module

DC to DC Up-Converter System	
Ordering Code	Description
CC109157657	J2007001L014 - DC input shelf
CC109170528	CP2500DC54-PEZ Power Module
150036109	CP841A_3C3R, Edge Controller for CP Shelf
CC848817651	Alarm Cable



Slimline Power System

48V DC Outside Plant and Customer Premise Solution

The Slimline Power System provides advanced controller features in a compact, cost-efficient footprint. The SPS shelf is 1.75" high, 10.3" deep and mounts in 19-inch or 23-inch wide frames, with three power slots for rectifiers and distribution. The Pulsar Edge controller has Ethernet connectivity to facilitate remote network management to monitor and control rectifiers, batteries, and distribution. SPS is a reliable DC power solution where system height and depth are restricted.

Shelf Options

The Slimline Power System product line provides several shelf options equipped with Ethernet, alarm inputs/outputs, and 1-Wire* connection for battery voltage and temperature monitoring. The rectifier-only shelf holds up to three 1600 Watt rectifier modules. Shelves can be deployed in parallel to increase output capacity. Other shelf configurations hold up to two 1000 Watt rectifier modules and include an integrated distribution module with circuit breakers, GMT fuse positions, and low-voltage battery disconnect circuit.

SPS TE Rectifier

This hardened rectifier is a single phase, hot pluggable, fan cooled rectifier that provides up to 1600 Watts of high availability DC power. The constant output power characteristics, extended temperature range, universal AC input, and compact size are key attributes that make this rectifier the right choice for your power needs.

Pulsar Edge Controller

SPS features the Pulsar Edge controller delivering large system intelligence in a small system form factor. Ethernet connectivity with SNMP facilitates remote network management.

Feature and Benefits

- Customer premise power for converged networks
- Large plant features in a small plant package
- 3000 Watts / 60 Amps single shelf capacity in 1RU
- 10.3 inches (264mm) depth is ideal where space is restricted
- 95% Efficiency

SPS TE Rectifiers



The SPS TE rectifiers are single phase, hot-pluggable, fan cooled rectifiers that provide highly reliable DC power. As cost-effective rectifiers that occupy just 1RU, its shallow depth is an ideal power solution for space critical applications. The constant output power characteristics as well as the extended temperature range, universal AC input voltage range and compact size are key attributes that make this rectifier the right choice for your power needs.

These rectifiers are applicable for indoor and outdoor environments especially where equipment depth and height are restricted. The SPS TE rectifiers communicate digitally to the Pulsar Edge controller family over a RS485 bus to add extensive monitoring and alarm management facilities. Its flexible and sophisticated feature set makes this front-end supply an excellent choice for power in a variety of application spaces.

Applications

- Telecommunications networks
- Digital subscriber line (DSL)
- Indoor/outdoor wireless
- Routers/switches
- Fiber in the loop
- Transmission
- Data networks
- PBX

Key Features

- Extended temperature range
- Redundant fan cooling
- Front panel LED indicators
- 1U height, minimized depth
- Universal AC input
- Analog load sharing
- Hot pluggable
- RoHS compliant

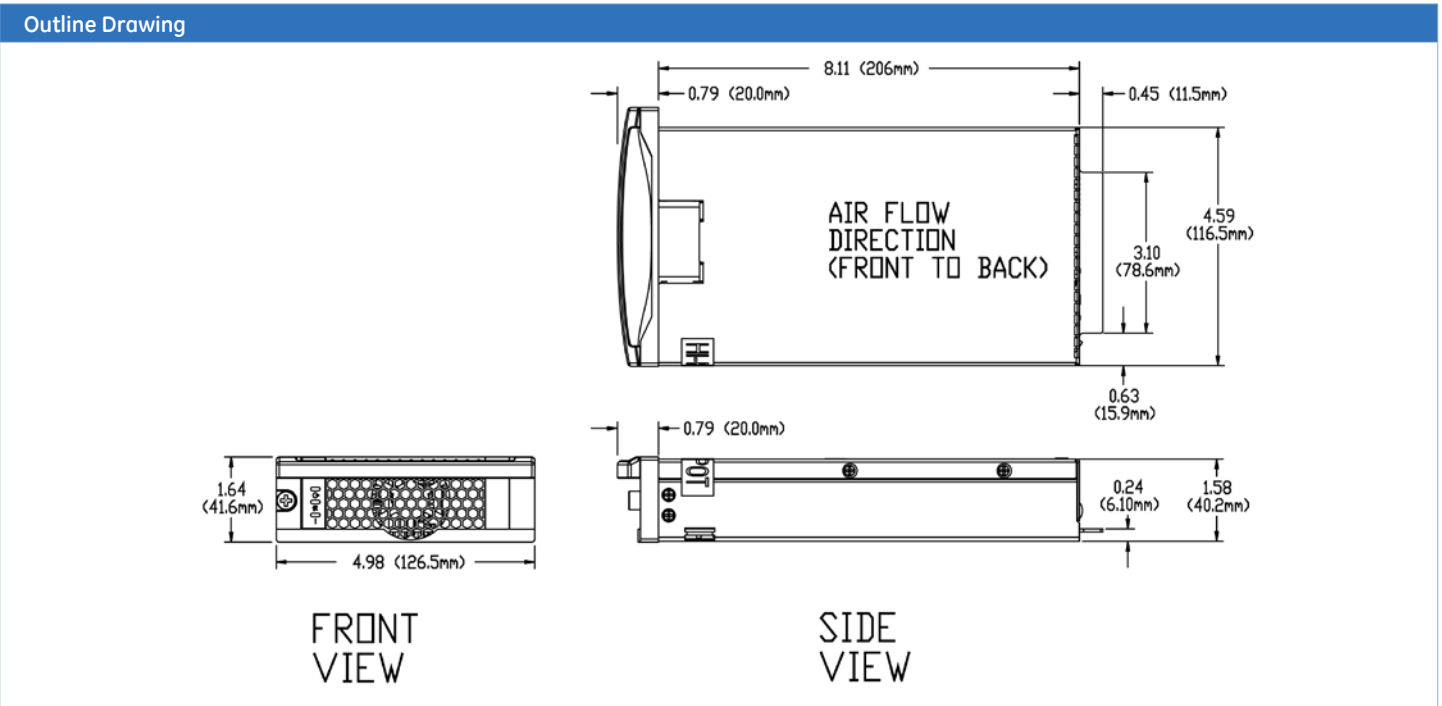
Input	EP0500UTEZ	EP1000UTEZ	EP1600UTEZ
Voltage Range - Low-Line - High-Line	90-175Vac (500W) 176-264Vac (500W)	90-175Vac (1000W) 176-264Vac (1000W)	90-175Vac (1200W) 176-264Vac (1600W)
Input Current	6.25-4.5A @ 90-120Vac 2.55A @ 230Vac	12.5-9.3A @ 90-120Vac 5.1A @ 230Vac	15-12A @ 90-120Vac 7.5A @ 230Vac
Input Frequency	45 – 65Hz	45 – 65Hz	45 – 65Hz
Inrush Transient	25 Apk	25 Apk	25 Apk
Power Factor	~1.0	~1.0	~1.0
Efficiency	95%	95%	95%
Total Harmonic Distortion	<5%	<5%	<5%
Holdup Time	>10 ms full power	>10 ms full power	>10 ms full power
Output			
Voltage Adjust Range	42-58Vdc	42-58Vdc	42-58Vdc
Voltage Nominal	54.5V	54.5V	54.5V
Rated Output Current - Low Line - High Line	10A dc max 10A dc max	20A dc max 20A dc max	24A dc max 32A dc max
Rated Output Power - Low Line - High Line	500 Watts (10A) 500 Watts (10A)	1000 Watts (20A) 1000 Watts (20A)	1200 Watts (24A) 1600 Watts (32A)
Psophometric Noise	<5 mV max	<5 mV max	<5 mV max
Ripple	<200 mVpkpk	<200 mVpkpk	<200 mVpkpk
Overvoltage Protection	59.5Vdc	59.5Vdc	59.5Vdc
Control and Monitoring			
Visual Status Indicators	Run, Alarm and Fault LEDs		
Serial Interface	Half duplex RS485 (GP Protocol)		

Environmental	
Operating Temperature	-40°C to +75°C (-40°F to 167°F)
Storage Temperature	-40°C to +85°C (-40°F to 185°F)
Power Derating	> +50°C 2% per degree Celcius
Humidity	< 95% non-condensing
Altitude	4000M max
Audible Noise	< 55dBA

Mechanical	
Length (inch/mm)	8.11 / 206.0
Width (inch/mm)	4.98 / 126.5
Height (inch/mm)	1.64 / 41.6
Weight (lb/Kg)	3.08 / 1.4

Safety and Standards Compliance	
NEBs	Evaluated by independent NRTL test lab to Telcordia GR63, Issue 4 & GR 1089, Issue 6
Safety	CE mark to Low Voltage Directive 2006/95/EC and EMC Directive 2004/108/E UL 60950-1, Recognized CSA C22.2 No. 60950-1-07, 2nd Ed. + A1:2001 (MOD) Certified VDE0805:2001 12 (EN 609501) Licensed
RoHS	Compliant to RoHS EU Directive 2002/95/EC
EMC	CISPR22 (EN55022) Class B and FCC-CFR, Part 15, sub-part B Class B with shelf; GR1089 Class A
ESD	EN61000-4-2, Level 4

Note: Special cooling may be needed.



Pulsar Edge Controller



The SPS Pulsar Edge controller delivers large system intelligence in a small system form factor. This family of controllers functions as network interface cards (NIC) and as a full-featured battery plant controller. Its thin modular plug-in form factor minimizes shelf space consumption allowing maximum power module and distribution capabilities.

Applications

- Telecommunications networks
- Digital subscriber line (DSL)
- Indoor/outdoor wireless

Key Features

Remote Access and Features

- Integrated 10/100Base-T Ethernet Network
 - TCP/IP
 - SNMP V2c for management
 - SMTP for email
 - Telnet for command line interface
 - DHCP for plug-n-play
 - FTP for rapid backup and upgrades
 - HTTP for standard web pages and browsers
 - Compatible with Galaxy Manager and other management packages
 - Shielded RJ-45 interface referenced to chassis ground
- Password protected security levels: User, Super-User, Administrator for all access
- Ground-referenced RS232 system port
- ANSI T1.317 command-line interface
- Modem access support
 - Remote via external modem
 - Callback security
- EasyView2, Windows-based GUI software for local terminal or Modem access
- Optional 1U display with alarm indicating backlight feature

The controller is utilized in bulk power applications in data centers and enterprise applications. Ethernet connectivity with SNMP facilitates remote network management. Access through its front-accessible RS232 or USB port and aided by the EasyView2 graphical enables full user interface locally. Optional 1U display version allows convenient access to all controller functions without requiring external cable connections. The display also features alarm context sensitive backlighting for at-a-glance system status.

As a battery plant controller, it provides a complete set of features to monitor and control rectifiers, batteries, and distribution. A flexible set of configurable inputs allow

- Routers/switches
- Fiber in the loop
- Transmission

the Pulsar Edge controller to monitor a wide variety of system equipment and incorporate appropriate state information enabling a centralized point of management.

The controller utilizes standard network management protocols allowing for advanced network supervision. GE Galaxy Manager* software is the centralized visibility and control component of a comprehensive power management system designed to meet engineering, operations and maintenance needs. The Galaxy Manager client-server architecture enables remote access to system controllers across the power network.

- Data networks
- PBX

Standard System Features

- Monitor and control of more than 40 connected devices
 - Maximum of 32 rectifiers
 - Maximum of 6 distribution control cards
 - Robust RS485 system bus
- Standard and user defined alarms
 - Alarm test
 - Assignable alarm severity: Critical, Major, Minor, Warning, and record-only
- Rectifier management features
 - Automatic rectifier restart
 - Adaptive Rectifier Management (energy efficiency)
 - Remote rectifier (on/off)
 - Reserve Operation
 - Automatic rectifier sequence control
 - N + X redundancy check
- Multiple Low Voltage Load and Low Voltage Battery Disconnect thresholds (4)
- Configuration, statistics, and history
 - All stored in non-volatile memory
 - Remote/local backup and restore of configuration data
- Industry standard defaults
 - Customer specific configurations available
- Remote/ local software upgrade
- Basic, busy hour, and trend statistics
- Detailed event history
- User defined events and derived channels

Standard Battery Management Features

- Float/boost mode control
 - Manual boost
 - Manual timed boost locally, T1.317, and remotely initiated
 - Auto boost terminated by time or current
- Battery discharge testing
 - Manual (local/remote)
 - Periodic
 - Plant Battery Test (PBT) input driven
 - Configurable threshold or 20% algorithm
 - Graphical discharge data
 - Rectifiers on-line during test
- Slope thermal compensation
 - High temperature
 - Low temperature
 - Step temperature
 - STC Enable/Disable, low temperature Enable/Disable
 - Configurable mV/°C slopes
- State of charge indication
- High temperature disconnect setting
- Reserve-time prediction
- Recharge current limit
- Emergency Power-Off input

Integrated Monitoring Inputs/Outputs




- System plant voltage (accuracy $\pm 0.5\%$, resolution 0.01V)
- One system shunt (accuracy $\pm 1\%$ full scale, resolution 1A)
 - Battery or load
 - Mounted in the return side of DC bus
- Up to 15 binary inputs
 - Six inputs close/open to battery
 - 9 input close/open to return (number is dependent upon number of output alarms)
 - User assignable
- Up to 5 user assignable Form-C output alarms (50VDC @.3A)
- 1-Wire* bus devices
 - Up to 16 temperature probes (QS873)
 - Up to 6 mid-string monitors (ES771)


General	
Operating Voltage	± 24 Vdc, ± 48 Vdc (Range: ± 18 to ± 60 Vdc)
Input Power	Less than 7W
Operating Temperature Range	-40°C to +70°C (-40°F to 167°F)
Operating Relative Humidity	0 - 95% (non-condensing)
Storage Temperature Range	-40°C to +85°C (-40°F to 185°F)
Physical Specifications	1.75 in. H, 0.75 in. W, 8.00 in. D; 0.5lb
Display	8-line by 40-character backlit LCD
EMC	FCC/EN55022 Class A, CISPR22 Level A

Galaxy Manager Compatible

- Centralized web server and database with multiple user access to live or managed data with drill down to problem details
- Monitor and control of more than 40 connected devices
- Management information from polling or alarms received from alarm traps from multiple sites are available on one screen via the inter/intranet
- Trend user selected data over time
- Automatic or manual report generation
- Standard engineering tools like reserve time calculators and cable voltage drop analyzer

Agency Certifications	
Electrostatic Discharge	EN 61000-4-2 level 4
Radiated Emissions	FCC, Class A; EN 55022, Class A
Safety	UL Listed Component as Part of CPL or SPS Power System

Controller		
Ordering Code	Description	Photo
CC109142238	SPS841A_3C3R Controller	
CC109156898	SPS841A_015R Controller	
150027896	SPS841A_910R Controller	

Rectifier Module		
Ordering Code	Description	Photo
150027894	500W Rectifier EP0500-UTEZ	
CC109165602	1000W Rectifier EP1000-UTEZ	
CC109165610	1600W Rectifier EP1600-UTEZ	

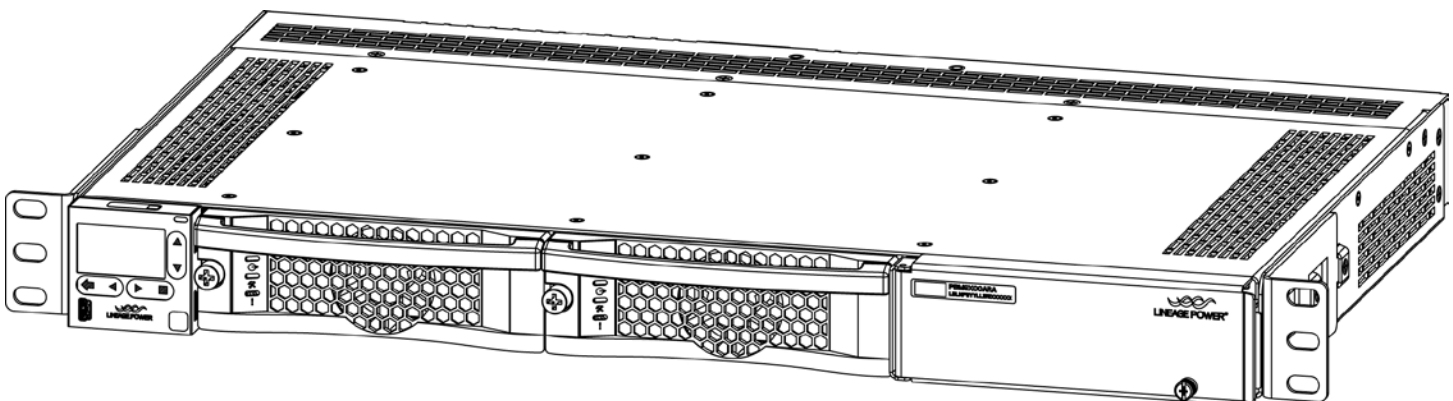
Ordering Information – Slimline Power System

1RU Shelves


Ordering Code	Description	Rectifier Slots	DC Output		Battery Breakers	LVD	AC Input
CC109148136	J2007003L001	3	Bulk	Rear	0	None	Single IEC C19
CC109146503	J2007003L001A	3	Bulk	Rear	0	None	Individual IEC C13
CC109148144	J2007003002	2	6 GMT's	Front	1	LVBD	Single IEC C13
CC109165890	J2007003002D	2	6 GMT's / Door	Front	1	LVBD	Single IEC C13
CC109151536	J2007003002A	2	6 GMT's	Front	1	LVBD	Individual IEC C13
CC109165916	J2007003002AD	2	6 GMT's / Door	Front	1	LVBD	Individual IEC C13
CC109156907	J2007003002X	2	6 GMT's	Front	1	None	Single IEC C13
CC109165908	J2007003002XD	2	6 GMT's / Door	Front	1	None	Single IEC C13
CC109156915	J2007003'002AX	2	6 GMT's	Front	1	None	Individual IEC C13
CC109165924	J2007003002AXD	2	6 GMT's / Door	Front	1	None	Individual IEC C13
CC109158696	J2007003002AXB	2	6 GMT's	Front	0	None	Single IEC C13
CC1091659232	J2007003002AXB	2	6 GMT's / Door	Front	0	None	Single IEC C13
CC109146511	J2007003004	2	10 GMT's	Rear	2	LVBD	Single IEC C13
CC109156923	J2007003004X	2	10 GMT's	Rear	2	None	Single IEC C13
150026024	J2007003004XB	2	10 GMT's	Rear	0	None	Single IEC C13
CC109151544	J2007003004A	2	10 GMT's	Rear	2	LVBD	Individual IEC C13
CC109156931	J2007003004AX	2	10 GMT's	Rear	2	None	Individual IEC C13
150024564	J2007003004AXB	2	10 GMT's	Rear	0	None	Individual IEC C13
CC109156114	J2007003011	3	12 GMT's	Rear	0	None	Single IEC320 C19
CC109159372	J2007003014	2	1-30A Brkr / 10 GMT's	Rear	1	LVBD	Rear Terminal
150033629	J2007003014LA	2	1-30A Brkr / 10 GMT's	Rear	1	LVLD	Single IEC C13
150030787	J2007003014XA	2	1-30A Brkr / 10 GMT's	Rear	1	None	Single IEC C13


AC Input , DC Output Cables (105° C Wire)	
C13 plug with 5-15P plug, 14AWG, 10'	CC848776105
C13 plug with L6-20P plug, 14AWG, 10'	CC848820317
C13 plug, unterminated, 14AWG, 10'	847861192
C13 AC Cord Retaining Clamp	CC848885698
C19 plug, with 5-15P plug, 12AWG, 8'	CC848850792
C19 plug, with L6-20P plug, 12AWG, 8' (List 1 Only)	CC848850842
C19 plug, unterminated, 12AWG, 8' (List 1)	CC848847368
C19 AC Cord Retaining Clamp	CC848887158
DC output cable 2 AWG, 10' (List 1, 1A only)	848748987




AC Input , DC Output Cables (105° C Wire)	
5' Alarm (J1) or distribution (J7) cable	CC848890153
15' Alarm (J1) or distribution (J7) cable	CC848865980
50' Alarm (J1) or distribution (J7) cable	CC848817651
5' Alarm input cable (J2)	CC848890203
15' Alarm input cable (J2)	CC848853614
50' Alarm input cable (J2)	CC848890211
Shelf to shelf communication cable (J4) (List 1, 1A only)	CC848847780



2RU Shelves and Larger

Stackable Shelf Solutions						
Ordering Code	Description	Load Breaker Positions	Load GMT Fuse Positions	Battery Breaker Positions	LVD	Photo
150030465	-48V, 2U SPS Power Shelf SPS-2U-AC5-PS3-DC12-LVBD	2	12	2	LVBD	
150032350	-48V, 2U SPS Power Shelf SPS-2U-AC5-PS3-DC24B-LVBD	0	24	2	LVBD	

Bulk Shelves						
Ordering Code	Description	AC Input	Rectifier Slots	Controller Support	DC Output	Photo
150028854	-48V, 1RU SPS Supplemental Bulk Shelf J2007003L052C	Rear AC Terminal	3	No	Rear Bulk	

1RU Distribution Shelves						
Ordering Code	Description	Load Breaker Positions	Load GMT Fuse Positions	Battery Breaker Positions	LVD	Photo
150032397	-48V, 1RU SPS Distribution Shelf J2013001L101B	2	0	2	LVBD	
150032400	-48V, 1RU SPS Distribution Shelf J2013001L106	4	0	0	No	
150032401	-48V, 1RU SPS Distribution Shelf J2013001L107	0	36	0	No	



SPDU

Secondary Power Distribution Unit

The GE SPDU serves as a secondary power distribution center for +24Vdc or -48Vdc DC power delivered from a battery plant to the load equipment. The 4U (7 in.) tall configuration is versatile with 19" or 23" rack or wall mounted panels with fuse or circuit breakers options, single or dual (A/B) load bus, and 600A carrying capacity per panel (300A per bus in dual load bus configurations.) A digital meter monitors voltage and current of each load bus.

Fuse / Circuit Breaker Panels

Distribution protector options include:

- 6 position GMT bullet fuseholder
- 6 position 0-125A TPS/TLS fuseholder
- 22 position 0-250A circuit breakers for 23" wide panels

VIM 1 Intelligent Meter

Typical DC distribution panels have a simple 477C alarm card that indicates a breaker/fuse alarm with a visual red alarm light and an isolated closure for remote monitoring. The SPDU provides a digital smart meter for more extensive monitoring and control. The is the same smart meter used in the large H569-445 BDFB. The VIM1 monitor, or smart meter, has an alarm sensitive back-lit display that changes color from green to red on alarm. Current, voltage and alarm information for the A and B buses are accessed thru the display. There are three primary alarms:

Power Loss/Under Voltage: Generates an alarm when power is lost to either the A or B bus; or when a user configurable low voltage threshold is reached.

Overload: Generates an alarm when a user configurable current threshold is reached. A configurable time delay may also be set to avoid nuisance alarms due to bus transients.

Breaker/Fuse: Generates an alarm when either a circuit breaker trips or a fuse blows.

The VIM 1 digital meter includes an audible alarm with a user configurable on/off feature. There is a form-C relay for each of the three alarms for remote monitoring - power loss/under voltage, current overload/threshold exceeded, and blown fuse/breaker trip. There are two RJ45 type connectors on the board that allow multiple VIM 1 boards to be daisy chained together for network connectivity.



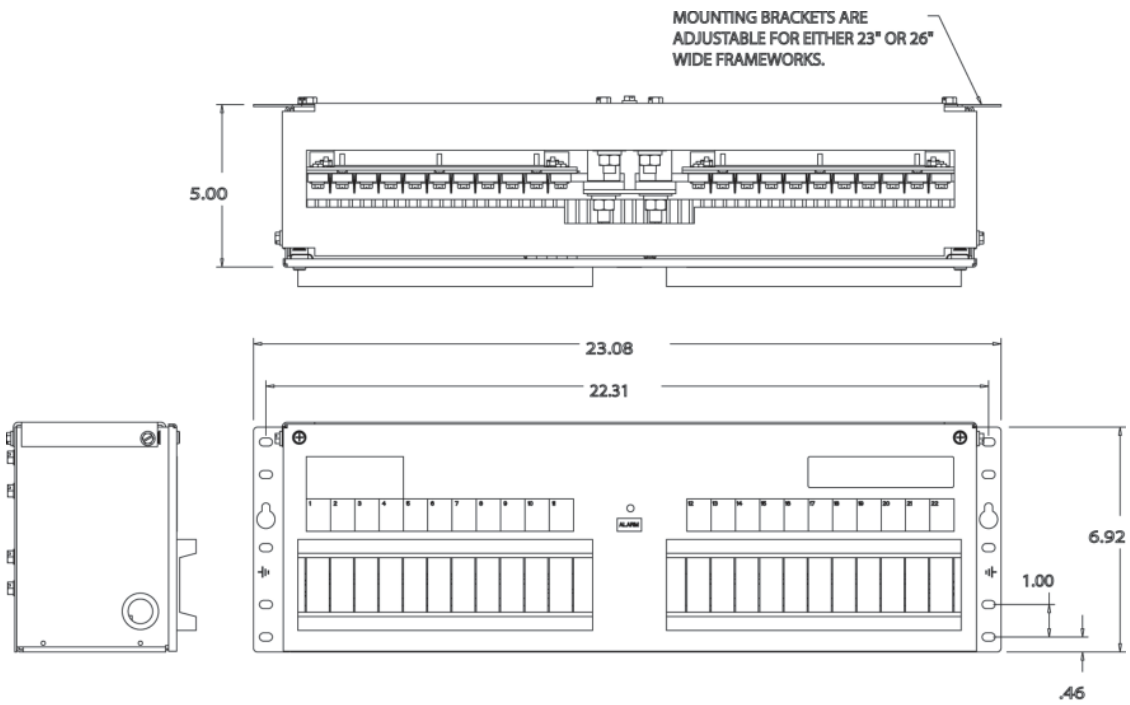
Feature and Benefits

- Ideal for premise power applications
- Digital meter interface
- 600 Amp capacity panels in a compact 4 RU size
- Small power distribution from battery plant to load equipment

Specifications

Mechanical	
Height	7 in. (175.7mm)
Width	19 in. (484mm) or 23 in. (586mm)
Depth	5 in. (127mm)
Weight	Approx 15.2 lbs (7kg)
Agency Certifications	
Telcordia	NEBs Level 3 Compliant
UL	Canada/US UL60950/UL1801
CE	CE mark
EMI/EMC	CISPR class A conducted and radiated

Outline Drawing (for visual reference only)



23" DC Distribution Panel with 477C alarm card

SPDU Ordering Information

Select SPDU Panel	
Ordering Code	Description
CC109160883	Group 2: 23" SPDU, dual bus, dual shunt, smart meter, 22 breaker/fuse positions

Bullet Style Load Circuit Breakers				
Ordering Code	Amperage	CB Positions (Poles)	Min Wire Gauge	Photo
407998137	3	1	10	
407998145	5	1	10	
407998152	10	1	10	
407998160	15	1	10	
407998178	16	1	10	
407998186	20	1	10	
407998194	25	1	10	
407998202	30	1	10	
408213486	40	1	8	
407998210	45	1	8	
407998228	50	1	6	
407998236	60	1	6	
407998244	70	1	2	
407998251	80	1	2	
407998269	90	1	2	
407998277	100	1	2	
CC848808551	100	2	2	
408185353	125	2	2	
408185346	150	2	1/0	
408564941	200	3	2/0	
CC408573975	225	3	4/0	
408535752	250	3	4/0	
848631479	2-pole adapter bus kit (includes bus for 1/4" hole lug on 5/8" centers and hardware), order one per breaker GPS 4827 only			
848745662	3-pole adapter bus kit (includes bus for 5/16" hole lug on 1" centers and hardware), order one per breaker GPS 4827 only			

5067 Mini BDFB / BDCBB

Up to 4 Loads, 600 Amps per Load

The 5067 is a compact, high density, mini BDFB/BDCBB designed for rapid deployment. With offerings in 19" and 23" the 5067 can support single, dual or four load buses with a carrying capacity of up to 600A per load. The need to specify distribution components at the time of order is unnecessary, plug-in breakers or fuses can be easily installed when the panel arrives on-site or deferred for future needs.

Fuse / Circuit Breaker Panels

Distribution options are user defined based on the requirement; TPS fuses are available with ratings up to 70 Amps, TPL fuses with ratings up to 250 Amps, and circuit breakers are available with ratings up to 150 Amps.

Digital Meter

The Digital Meter is designed to monitor the volts and current of each load, selectable. Extended alarming is available for ABS fusing, power loss, fuse alarm. Fuse Alarm is provided as a visual or audible indicator if a protection device trips, blows, or otherwise fails. Test jacks and front panel calibration is also offered on specific digital meter options.



Feature and Benefits

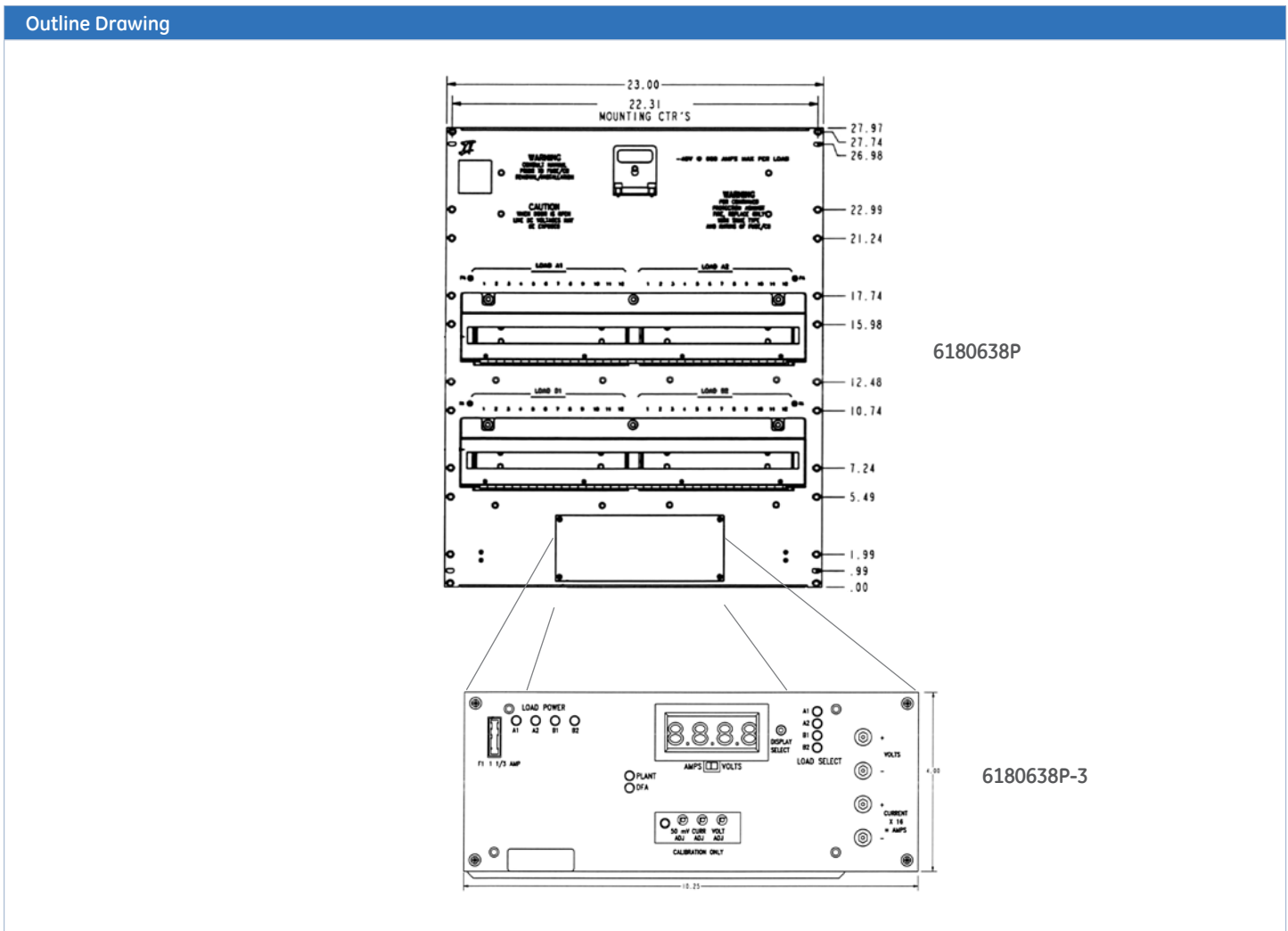
- Compact unit can be placed at the point of load
- High density – models available with 48 circuits in 16RU
- Digital metering, extended alarms and load disconnect are options for most configurations
- Flexible – circuit breakers and fuses can be added as needed, lower initial deployment costs

Specifications

Current	6180638P
Maximum Load	1200A
Per Load	600A
Load Complement	2 or 4
Distribution Positions	48 plug in

Mechanical	6180638P
Width (inch/mm)	23 / 584
Depth (inch/mm)	15.25 / 387
Height (inch/mm)	27.97 / 710

Safety and Standards Compliance	
NEBS	Evaluated by independent NRTL test lab to Telcordia GR63, Issue 4 & GR 1089, Issue 6
Safety	UL60950-04, UL198L, UL489





Ordering Information – 5067 Mini BDFB/BDCBB

Select BDFB/BDCBB Options

Configured BDFB Cabinets	
Ordering Code	Description
6180638P	Basic Mini BDFB, 2 load, 600A per load, 48 plug in distribution positions, single bus See Tables A, B, C, D & E for distribution components
6180638P-3	Digital Meter for 6180638P
4082260P	(2) required; recommended for use with the 3" closed channel relay racks for correct spacing from the rear.

Select Distribution Components

Plug in Style Circuit Breakers & Accessories			
Ordering Code	Amperage	Positions (Poles)	Photo
3050107P-2	2A	1	
3050107P-5	5A	1	
3050107P-10	10A	1	
3050107P-15	15A	1	
3050107P-20	20A	1	
3050107P-25	25A	1	
3050107P-30	30A	1	
3050107P-40	40A	1	
3050107P-50	50A	1	
3050107P-60	60A	1	
3050107P-70	70A	1	
3050107P-80	80A	1	
3050107P-100	100A	1	
6426491P-150	150A	2	



Infinity Power Systems

GE Infinity Power Systems are modular power plants that support dual voltage (+24V/-48V) operation through the use of a comprehensive range of advanced rectifiers and DC/DC converter modules. Primary voltage is supported by rectifiers and battery reserve, while the optional secondary voltage is supported by DC/ DC converter modules.

The RBA72 Power Cabinet is equipped with the Infinity S DC energy system that supports dual voltage (-48V/+24V) operation. The cabinet provides individual compartments for the power equipment and batteries. A dual loop heat exchanger allows for temperature control of the battery compartment while allowing the equipment to run at its designed range for maximum cooling cost efficiency.

Infinity Rectifier and Converter Family

The Infinity Series offers DC rectifiers and converters for both +24V to -48V and -48V to +24V applications. For easy module selection, the rectifiers and converters are color coded to quickly identify voltage, module type and input voltage type (AC or DC).

Galaxy Pulsar* Plus Controller

The Galaxy Pulsar Plus is used throughout many of the GE DC Power products including Infinity, CP, and SPS with the only differentiator being the form factor which is scaled to meet the nature of the application. The controller utilizes standard network management protocols allowing for advanced network supervision with SNMP communications to deliver extensive monitoring and control features with both local and remote access.

Benefits

Reliability

- Proven field performance
- Excellent fault tolerance

Intelligence

- Ethernet interface for remote access and SNMP capability
- Centralized network management
- Industry leading control features

Investment Protection

- Module Compatibility
- Power Shelf Growth
- Secondary Voltage flexibility +24V / -48V
- Flexible upgrade options

On Time Delivery

- MWBE warehouse utilized for immediate availability
- 24/7 technical support
- Common building blocks for both positive and negative output models

- *ECO Priority Source** Ready
- Dual Voltage power system with ultimate flexibility
- -48V up to 1,600A (86KW) or +24V up to 1,600A (44KW)
- Secondary Voltage Load capacity up to 600A
- High availability wireless telecom applications
- Telecom service providers
- Efficiency approaching 97%

Infinity Rectifiers and Converters



- **Compact** – 1RU form factor providing high power density (24 W/in³)
- **Dual Voltage compatibility** – the unique connector pin designation allows the rectifier to be used in a “universal” power shelf, alongside rectifiers or DC-DC converters with different output voltages.
- **Plug and Play** – installation of the rectifier in a shelf connected to a compatible system controller initializes all set up parameters automatically. No adjustments are needed.
- **Extended service life** – parallel operation with automatic load sharing ensures that parallel units are not unduly stressed even when a unit fails or is removed.
- **Monitoring / control** – the built in microprocessor controls and monitors all critical rectifier functions and communicates with the system controller using the built in Galaxy Protocol serial interface.
- **Fail safe performance** – hot insertion capabilities allow for converter replacement without system shutdown; soft start and inrush current protection prevent nuisance tripping of upstream breakers.

Applications

- Telecommunications Networks
- Digital Subscriber Line (DSL)
- Indoor/Outdoor Wireless
- Routers/Switches
- Fiber in the Loop
- Transmission
- Data Networks
- Distributed Antenna Systems
- Off-Grid/On-Grid Renewable Energy Sites

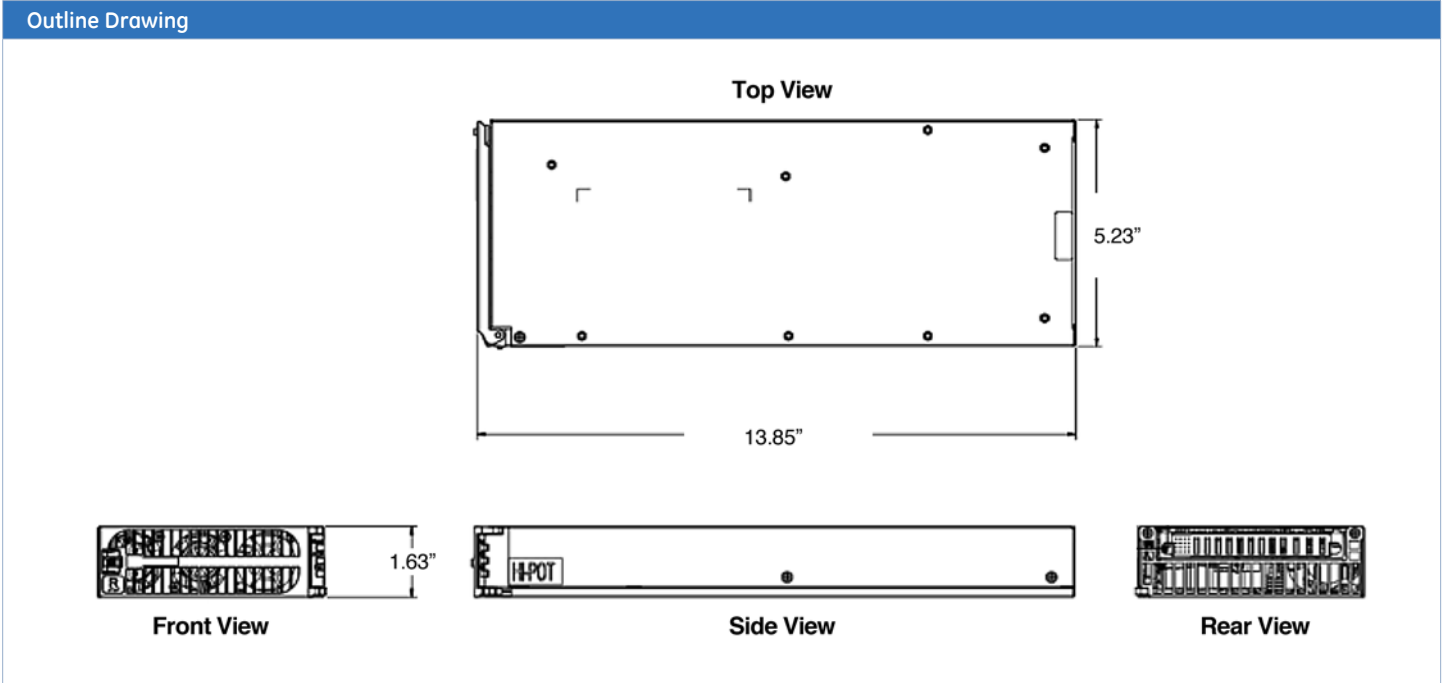
Key Features

- Extended temperature range
- Redundant fan cooling
- Front panel LED indicators
- 1U height, hi power density
- 220/110V AC input
- Digital load sharing
- Hot pluggable
- RoHS compliant
- Direct solar input (no inverter required)

Specifications

Input	NE100AC24ATEZ NE100ECO24ATEZ	NE050AC48ATEZ NE050ECO48ATEZ	NE075AC48ATEZ	NE030DC48A	NE040DC48AZ	NE075DC24A
Voltage Range	95-275Vac	95-275Vac	95-275Vac	21-30Vdc	21-30Vdc	42-60Vdc
Input Current	15-12A @ 100-120Vac 15-12A @ 200-240Vac	15-12A @ 100-120Vac 15-12A @ 200-240Vac	15-12A @ 100-120Vac 22-18A @ 200-240Vac	63A @ 27Vdc 81A @ 21Vdc	94A @ 27Vdc 108A @ 21Vdc	41A @ 54.5Vdc 54A @ 42Vdc
Input Frequency	45 – 66Hz	45 – 66Hz	45 – 66Hz	-	-	-
Power Factor	0.98 at>50% load	0.98 at>50% load	0.98 at>50% load	-	-	-
Efficiency	> 95% (Peak 95.6%)	> 96% (Peak 96.9%)	> 96% (Peak 96.9%)	-	-	-
Total Harmonic Distortion	<5% @loads over 50%	<5% @loads over 50%	<5% @loads over 50%	-	-	-
Output						
Voltage Adjust Range	21-29Vdc	42-58Vdc	42-58Vdc	46-57Vdc	46-57Vdc	23-28Vdc
Voltage Nominal	27.25V	54.5V	54.5V	52.0V	52.0V	27.2V
Regulation (with controller)	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
Ripple	100mVrms	100mVrms	100mVrms	100mVrms	100mVrms	100mVrms
Output Current - High-Line	114A @24V	57A @48V	85A @48V	30A @52.0V	40A @52.0V	75A @27.2V
- Low-Line	100A @27.25V 44A @27.25V	50A @54.5V 22A @54.5V	75A @54.5V 22A @54.5V	-	-	-
Heat Dissipation @ max out	174W / 594 BTU/hr	158W / 539 BTU/hr	249W / 850 BTU/hr	154W / 525 BTU/hr	205W / 700 BTU/hr	202W / 689 BTU/hr

Environmental	
Operating Temperature	-40°C to +75°C (-40°F to 167°F) Full capacity up to 55°C; output derates 2%/°C from 55°C to 75°C
Storage Temperature	-40°C to +85°C (-40°F to 185°F)
Humidity	< 95% non-condensing
Altitude	4000M (for altitudes above 2000M, peak operating temperature de-rates 0.656° C /100M; 4000M peak temperature rating is 62° C
Mechanical	
Length (inch/mm)	13.85 / 351.8
Width (inch/mm)	5.23 / 133
Height (inch/mm)	1.63 / 42
Weight (lb/Kg)	5.05 / 2.2
Safety and Standards Compliance	
NEBs Level 3	Evaluated by independent NRTL test lab to Telcordia GR63, Issue 4 & GR 1089, Issue 6
Safety	CE mark to Low Voltage Directive 2006/95/EC and EMC Directive 2004/108/E (Rectifiers only) UL 60950-1, 2nd Ed. Recognized CSA C22.2 No. 60950-1-07, 2nd Ed. + A1:2001 (MOD) Certified
RoHS	Compliant to RoHS EU Directive 2002/95/EC; RoHS 6/6 models with Z suffix (RoHS 5/6 all other models)
EMC	European Directive 2004/108/EC; EN55022, Class A; EN55024; FCC, Class A; GR1089-CORE, Issue 6
ESD	EN61000-4-2, Level 4



Pulsar Plus Controller



The Pulsar Plus family of controllers provides system monitoring and control features for Infinity, CP, and other power systems. These controllers monitor and control system components including rectifiers, converters, and distribution modules via a multi-drop RS485 digital communications bus. System status, parameters, settings, and alarm thresholds can be viewed and configured from the controller's front panel display. Assignment and configuration of alarm inputs and output relays can be performed from a laptop computer connected to a local RS-232 or Ethernet port, or by remote access is through a network connection to the World Wide Web (internet) or your enterprise network (intranet). An optional modem is also available.

This controller utilizes standard network management protocols allowing for advanced network supervision. The GE Galaxy Manager* software is the centralized visibility and control component of a comprehensive power management system designed to meet engineering, operations and maintenance needs. The Galaxy Manager client-server architecture enables remote access to system controllers across the power network, featuring **ECO Priority** advanced monitoring features which provides detailed energy source analysis to help better customize your renewable energy resources.

Applications

- Telecommunications Networks
- Digital Subscriber Line (DSL)
- Indoor/Outdoor Wireless
- Routers/Switches
- Fiber in the Loop
- Transmission
- Data Networks
- PBX
- Off-Grid/On-Grid Renewable Energy Sites

Key Features

Remote Access and Features

- Integrated 10/100Base-T Ethernet Network
 - TCP/IP
 - SNMP V2c for management
 - SMTP for email
 - Telnet for command line interface
 - DHCP for plug-n-play
 - FTP for rapid backup and upgrades
 - HTTP for standard web pages and browsers
 - Compatible with Galaxy Manager and other management packages
 - Shielded RJ-45 interface referenced to chassis ground
- Password protected security levels: User, Super-User, Administrator for all access
- Ground-referenced RS232 system port
- ANSI T1.317 command-line interface
- Modem access support
 - Remote via external modem
 - Callback security
- EasyView2, Windows-based GUI software for local terminal or Modem access
- **ECO Priority** controls and features
 - Advanced generator controls to help minimize fuel consumption for off grid applications
 - ECO Energy Management allowing for non-ECO sources outputs to be minimized while ECO resources are available
 - Source and load trend logging

Standard System Features

- Monitor and control of more than 40 connected devices
 - Robust RS485 system bus
- Standard and user defined alarms
 - Alarm test
 - Assignable alarm severity: Critical, Major, Minor, Warning, and record-only
 - 10 alarm relays (7 user assigned)
- Rectifier management features
 - Automatic rectifier restart
 - Active Rectifier Management ARM (energy efficiency)
 - Remote rectifier (on/off)
 - Reserve Operation
 - Automatic rectifier sequence control
 - N + X redundancy check
- Multiple Low Voltage Load and Low Voltage Battery Disconnect thresholds
- Configuration, statistics, and history
 - All stored in non-volatile memory
 - Remote/local backup and restore of configuration data
- Industry standard defaults
 - Customer specific configurations available
- Remote/ local software upgrade
- Basic, busy hour, and trend statistics
- Detailed event history
- User defined events and derived channels

Standard Battery Management Features

- Float/boost mode control
 - Manual boost
 - Manual timed boost locally, T1.317, and remotely initiated
 - Auto boost terminated by time or current
- Battery discharge testing
 - Manual (local/remote)
 - Periodic
 - Plant Battery Test (PBT) input driven
 - Configurable threshold or 20% algorithm
 - Graphical discharge data
 - Rectifiers on-line during test
- Slope thermal compensation
 - High temperature
 - Low temperature
 - Step temperature
 - STC Enable/Disable, low temperature Enable/Disable
 - Configurable mV/°C slopes
- State of charge indication
- High temperature disconnect setting
- Reserve-time prediction
- Recharge current limit
- Emergency Power-Off input

Integrated Monitoring Inputs/Outputs

- System plant voltage (accuracy $\pm 0.5\%$, resolution 0.01V)
- One system shunt (accuracy $\pm 0.5\%$ full scale, resolution 1A)
 - Battery or load
 - Mounted in the return side of DC bus
- Up to 15 binary inputs
 - Six inputs close/open to battery
 - 9 input close/open to return
 - User assignable
- Up to 7 Form-C output alarms (60VDC @ .5A)
 - User assignable
- 1-Wire* bus devices
 - Up to 16 temperature probes (QS873)
 - Up to 6 mid-string monitors (ES771)

General	
Operating Voltage	± 24 Vdc, ± 48 Vdc (Range: ± 18 to ± 60 Vdc)
Input Power	Less than 7W
Operating Temperature Range	-40°C to +75°C (-40°F to 167°F)
Operating Relative Humidity	0 - 95% (non-condensing)
Storage Temperature Range	-40°C to +85°C (-40°F to 185°F)
Physical Specifications	Sizes vary by packaging option
Display	8-line by 40-character with alarm context sensitive backlit LCD

The image shows three overlapping LCD display screens. The top screen is red and displays '-54.48V, 100A' and 'CHARGE' with a 'Menu' button. The middle screen is yellow and displays '-54.48V, 100A' and 'CHARGE' with a 'Menu' button. The bottom screen is green and displays '-54.48V, 100A', 'Float', 'No Alarms', and 'Menu' with a 'Menu' button. The word 'Amber' is written below the green screen, and 'Green' is written below the entire set of screens.

Galaxy Manager Compatible

- Centralized web server and database with multiple user access to live or managed data with drill down to problem details
- Monitor and control of more than 40 connected devices
- Management information from polling or alarms received from alarm traps from multiple sites are available on one screen via the inter/intranet
- Trend user selected data over time
- Automatic or manual report generation
- Standard engineering tools like reserve time calculators and cable voltage drop analyzer

Safety and Standards Compliance	
NEBs	Evaluated by independent NRTL test lab to Telcordia GR63, Issue 4 and GR1089-CORE, Issue 6
Safety	CSA C22.2 No. 60950-1-07, 2nd Ed. + A1:2001 (MOD) Certified for Canada and U.S.; UL60950-1 1st Ed.
RoHS	Compliant to RoHS EU Directive 2002/95/EC RoHS 5/6
EMC	European Directive 2004/108/EC; EN55022, Class A, EN55024; FCC, Class A; GR1089-CORE, Issue 6

Agency Certifications	
NEBs Level 3	Evaluated by independent NRTL test lab to Telcordia GR63, Issue 4 and GR1089-CORE, Issue 6
EMC	European Directive 2004/108/EC; EN55022, (CISPR22) Class A, EN55024 (CISPR24)
Safety	Underwriters Laboratories (UL) Listed per Subject Letter 1801: Power Distribution Center for Communications Equipment, and cUL Certified (CSA 22.2 950): Safety of Information Technology Equipment

Infinity M Power System



Infinity M may be configured as a +24V or -48V single voltage power system or as a dual voltage power system that supports rectifiers and converters. The primary voltage is supported by +24V or -48V rectifiers and battery reserve, while secondary voltage is supported by DC-DC converters. Infinity-M includes dedicated 24V, 48V and return buses. The primary voltage capacity is 1,600A at 24V and 1,600A at 48V. Secondary voltage capacity is up to 600A. The system includes low voltage battery disconnect option for the primary voltage. A low voltage load disconnect option can be used for load shedding to maintain critical loads.

Applications

- Wireless Telecom Networks
- Central Office
- Indoor/Outdoor Wireless
- Remote Radio Sites
- Data Networks
- Off-Grid/On-Grid Renewable Energy Sites

Key Features

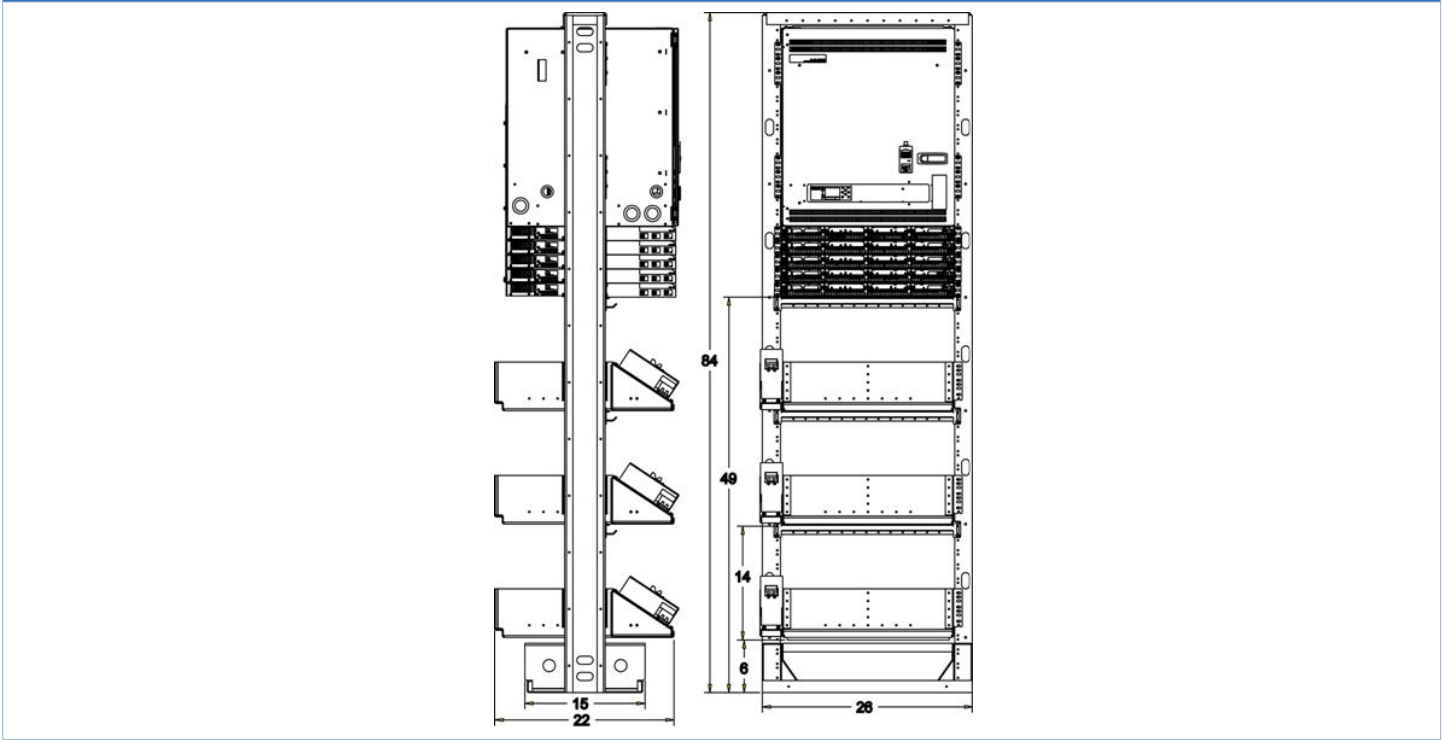
- Dual Voltage Flexibility
- Redundant fan cooling
- Front panel LED indicators
- 1U height, hi power density
- 220/110 V AC input
- Digital load sharing
- Hot pluggable
- RoHS compliant
- **ECO Priority** ready

Specifications

Input	Min	Typ	Max
Voltage Range			
- High-Line	175Vac	220Vac	275Vac
- Low-Line	85Vac	110Vac	140Vac
Frequency	45Hz	60Hz	66Hz
Power Factor	98%	99.5%	
Efficiency	Approaching 97%		
Total Harmonic Distortion			5%
Primary Output			
Nominal Voltage	+24Vdc		-48Vdc
Output Current	1,600A		1,600A
Vo Setpoint (factory)	+27.2V ±1%		-54.5V ±1%
Vo Range	+21Vdc to +29Vdc		-42Vdc to -58Vdc
Regulation	±0.5%		
Secondary Output			
Nominal Voltage	-48Vdc		+24Vdc
Output Current	600A		600A
Vo Setpoint (factory)	-54.5V ±1%		+27.25V ±1%
Vo Range	-42Vdc to -58Vdc		+21Vdc to +29Vdc
Regulation	±0.5%		
Mechanical			
Height (in. /mm)	31.5 / 800 (Base system with 4 power shelves)		
Width (in. /mm)	23 / 584.2 (Standard Frame)		
Depth (in. /mm)	21 / 533.4		
Weight (lb / Kg)	350 / 159 (Base System with 4 power shelves and 7ft frame, no rectifiers)		


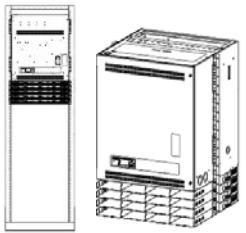

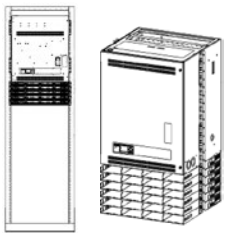

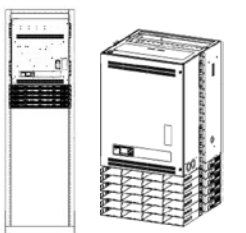

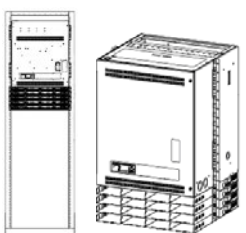

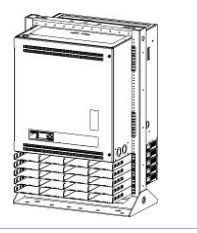

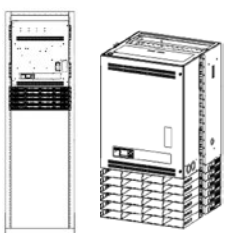
Environmental	
Operating Temperature	-40°C to +75°C (-40°F to 167 °F)
Storage Temperature	-40°C to +85°C (-40°F to 185 °F)
Relative Humidity	95% max, non-condensing
Altitude	4000M (for altitudes above 2000M, peak operating temperature de-rates 0.656 C° /100M; 4000M peak temperature rating is 62 C°)
Safety and Standards Compliance	
NEBs	Evaluated by independent NRTL test lab to Telcordia GR63, Issue 4 and GR1089-CORE, Issue 6
Safety	CSA C22.2 No. 60950-1-07, 2nd Ed. + A1:2001 (MOD) Certified for Canada and U.S.; UL60950-1 1st Ed.
RoHS	Compliant to RoHS EU Directive 2002/95/EC RoHS 5/6
EMC	European Directive 2004/108/EC; EN55022, Class A; EN55024; FCC, Class A; GR1089-CORE, Issue 6
Agency Certifications	
CSA	CSA C22.2 No 60950-1-07, 2nd Ed. + A1:2001 (MOD) and UL 60950-1 1st Ed
EMI/EMC	European Directive 2004/108/EC; EN55022 (CISPR22) Class A; EN55024 (CISPR24)
NEBS LEVEL 3	GR1089-CORE, Issue 6






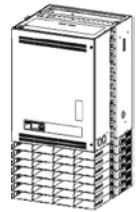


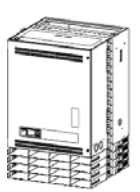



Outline Drawing (for visual reference only)



Infinity M Power System

Designed for shelter applications, the Infinity M is the choice for larger Cell Sites and DAS applications with higher load demands and may require secondary voltage power to support existing loads. All Infinity M are 100% front access including battery, load and AC input connections. AC inputs are in a protected terminal block section at the bottom of the distribution.

-48V Primary Voltage Systems				
Output	Ordering Code	Model	Frame	Picture
 800A	CC109152220	800A -48V single voltage system, includes 65 bullet breaker positions, plus 8 positions for large breakers, 4 Universal power shelves in 7ft Zone 4 frame, Door Mounted Pulsar 843C Controller, NO LVBD	7ft x 23" (Approx 34" open at bottom)	
		H5692448, G103, G843C, G220, G614, G622(2)	System Width 23"	
 1200A	CC109152212	1,200A -48V single voltage system, includes 65 bullet breaker positions, plus 8 positions for large breakers, 6 Universal power shelves in 7ft Zone 4 frame, Door Mounted Pulsar 843C Controller, NO LVBD	7ft x 23" (Approx 30" open at bottom)	
		H5692448, G103, G843C, G220, G614, G622(2), G300 (2)	System Width 23"	
 1200A	CC109159224	1,200A -48V single voltage system, includes 65 bullet breaker positions, plus 8 positions for large breakers, 6 Universal power shelves in 7ft Zone 4 frame, Door Mounted Millennium 2 Controller, NO LVBD	7ft x 23" (Approx 30" open at bottom)	
		H5692448, G103, G800, G220, G614, G622(2), G300(2)	System Width 23"	
-48V Primary Voltage Systems with +24V Converters				
Output	Ordering Code	Model	Frame	Picture
 48V, 800A 24V, 300A	CC109146610	800A 48V system, includes 80 cb positions (65 positions primary voltage and 15 positions selectable voltage), 4 Universal Power shelves, in 7ft Zone 4 frame (maximum 1200 lbs.), Door Mounted Pulsar 843C Controller, NE830 Voltage Monitor, LVBD	7ft x 23" (Approx 34" open at bottom)	
		H5692448, G104, G843C, G220, G615, G622(2), G600N	System Width 23"	
 48V, 1000A 24V, 300A	CC109136917	1,000A 48V system, includes 55 cb positions (40 positions primary voltage and 15 positions selectable voltage), 5 Universal Power shelves, in 42", half height frame, Door Mounted Pulsar 843C Controller, NE830 Voltage Monitor, NO LVBD	42" x 23"	
		H5692448, G102, G843C, G830, G220, G615, G622(2), G300	System Width 23"	
 48V, 1200A 24V, 300A	CC109142007	1,200A 48V system, includes 80 cb positions (65 positions primary voltage and 15 positions selectable voltage), 6 Universal power shelves, in 7ft Zone 4 frame, Door Mounted Pulsar 843C Controller, NE830 Voltage Monitor, No LVBD	7ft x 23" (Approx 30" open at bottom)	
		H5692448, G104, G843C, G830, G220, G618, G622(2), G300(2)	System Width 23"	

+24V Primary Voltage Systems with -48V Converters				
Output	Ordering Code	Model	Frame	Picture
 24V, 1200A 48V, 120A	CC109141974	1,200A (1,600A max) 24V system, includes 80 cb positions (65 positions primary voltage and 15 positions selectable voltage), 4 Universal Power shelves, LVBD, 7ft Zone 4 frame, Door Mounted Pulsar 843C Controller, NE830 Voltage Monitor, LVBD H5692448, G103, G843C, G830, G210, G618, G622(2), 600N	7ft x 23" (Approx 34" open at bottom) System Width 23"	 
 24V, 1600A 48V, 120A	CC109141990	1,600A 24V system, includes 80 cb positions (65 positions primary voltage and 15 positions selectable voltage), 6 universal power shelves & 1 dedicated converter shelf in 7ft Zone 4 frame (maximum 1200 lbs.), Door Mounted Pulsar 843C Controller, NE830 Voltage Monitor, NO LVBD H5692448, G104, G843C, G830, G210, G618, G622(2), G300(2), G700	7ft x 23" (Approx 34" open at bottom) System Width 23"	 
 24V, 1200A 48V, 120A	CC109141966	1,200A (1,600A max) 24V system, includes 80 cb positions (65 positions primary voltage and 15 positions selectable voltage), 4 Universal Power shelves, in 7ft Zone 4 frame (maximum 1200 lbs.), Door Mounted Pulsar 843C Controller, NE830 Voltage Monitor, NO LVBD H5692448, G104, G843C, G830, G210, G618, G622(2)	7ft x 23" (Approx 34" open at bottom) System Width 23"	 
 24V, 1200A 48V, 120A	150021839	1,200A (1,600A max) 24V system, includes 80 cb positions (50 positions primary voltage and 30 positions selectable voltage), 4 Universal Power shelves, in 7ft Zone 4 frame (maximum 1200 lbs.), Door Mounted Pulsar 843C Controller, NE830 Voltage Monitor, LVBD H5692448, G104, G843C, G830, G210, G619, G622(2), G600N	7ft x 23" (Approx 34" open at bottom) System Width 23"	 

Infinity S Power System



Infinity S may be configured as a +24V or -48V single voltage power system or as a dual voltage power system that supports rectifiers and converters. The primary voltage is supported by +24V or -48V rectifiers and battery reserve, while secondary voltage is supported by DC-DC converters. Infinity-S includes dedicated 24V, 48V and return buses. The primary voltage capacity is 1,200A at 24V and 800A at 48V. Secondary (-48V) voltage capacity is up to 300A. The system includes low voltage battery disconnect option for the primary voltage. A low voltage load disconnect option can be used for load shedding to maintain critical loads.

Applications

- Wireless Telecom Networks
- Indoor/Outdoor Wireless
- Transmission
- Data Networks
- Off-Grid/On-Grid Renewable Energy Sites

Key Features

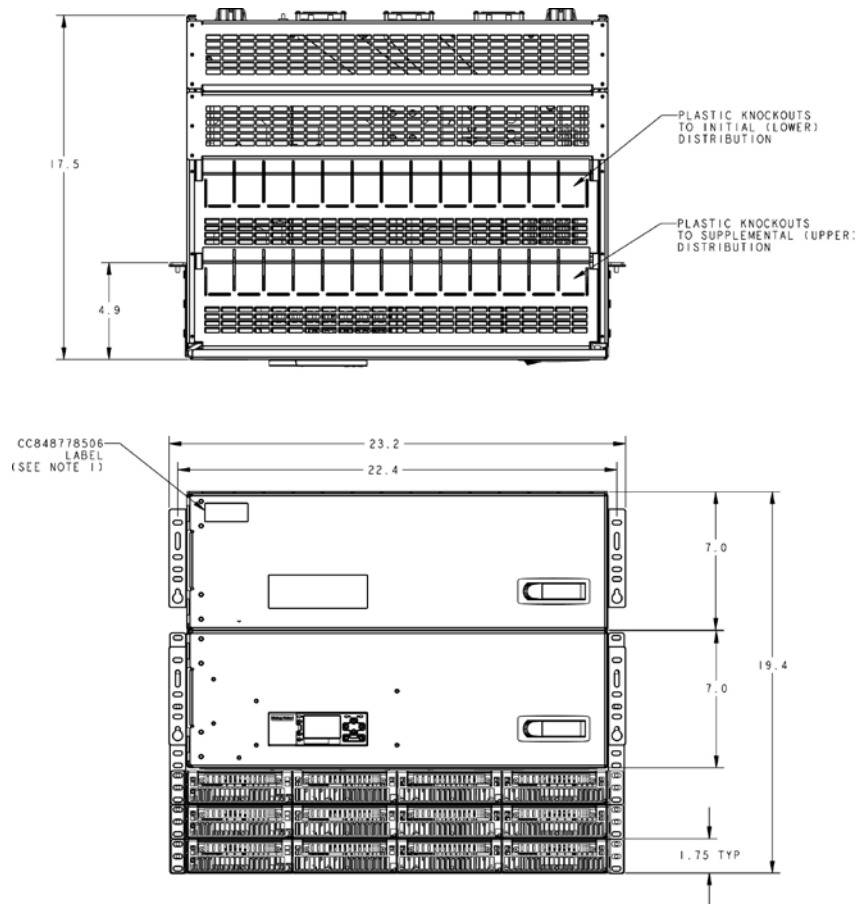
- Dual Voltage Flexibility
- Redundant fan cooling
- Front panel LED indicators
- 1U height, hi power density
- 220/110 V AC input
- Digital load sharing
- Hot pluggable
- RoHS compliant
- **ECO Priority** ready

Specifications

Input	Min	Typ	Max
Voltage Range			
- High-Line	175Vac	220Vac	275Vac
- Low-Line	85Vac	110Vac	140Vac
Frequency	45Hz	60Hz	66Hz
Power Factor	98%	99.5%	
Total Harmonic Distortion			5%
Primary Output			
Nominal Voltage	24Vdc		-48Vdc
Output Current	1,200A		800A
Vo Setpoint (factory)	27.2Vdc±1%		-54.5Vdc±1%
Vo Range	+21Vdc to +29Vdc		-42Vdc to -58Vdc
Regulation		±0.5%	
Secondary Output			
Nominal Voltage	-48Vdc		+24Vdc
Output Current	120A		300A
Vo Setpoint (factory)	-54.5Vdc±1%		27.25Vdc±1%
Vo Range	-42Vdc to -58Vdc		+21Vdc to +29Vdc
Regulation		±0.5%	
Mechanical		System Only	Frame Mounted System
Height (in. /mm)	21.25 / 540 (Base system with 4 power shelves and 2 distributions)		84 / 2134
Width (in. /mm)	23 / 584.2		26 / 660.4
Depth (in. /mm)	21 / 533		21 / 533
Weight (lb / Kg)	108 / 49 (Base system with 4 power shelves and 2 distributions)		292 / 132

Environmental	
Operating Temperature	-40°C to +75°C (-40°F to 167 °F)
Storage Temperature	-40°C to +85°C (-40°F to 185 °F)
Relative Humidity	< 95% non-condensing
Altitude	4000M (for altitudes above 2000M, peak operating temperature de-rates 0.656° C /100M; 4000M peak temperature rating is 62° C)
Safety and Standards Compliance	
NEBs	Evaluated by independent NRTL test lab to Telcordia GR63, Issue 4 and GR1089-CORE, Issue 6
Safety	CSA C22.2 No. 60950-1-07, 2nd Ed. + A1:2001 (MOD) Certified for Canada and U.S.; UL60950-1 1st Ed.
RoHS	Compliant to RoHS EU Directive 2002/95/EC RoHS 5/6
EMC	European Directive 2004/108/EC; EN55022, Class A; EN55024; FCC, Class A; GR1089-CORE, Issue 6
Agency Certifications	
CSA	CSA C22.2 No. 60950-1-07, 2nd Ed. + A1:2001 (MOD) and UL 60950-1 1st Ed.
EMI/EMC	European Directive 2004/108/EC; EN55022, Class A; EN55024; FCC, Class A; GR1089-CORE, Issue 6
NEBS LEVEL 3	Evaluated by independent NRTL test lab to GR 1089-CORE, Issue 6

Outline Drawing (for visual reference only)



Select Infinity S Power System

Designed for installations that require a small, low powered -48V power solution, this Infinity solution is perfect for small LTE and DAS sites.

Single Voltage Power System -48V, 19" width							
Output Rating	Description	AC Input	LVD	Frame	Ordering Code	Model	Photo
-48V 225A	225A Infinity S Power System equipped with 3 universal positions and 20 distribution positions selectable between -48V Load and Battery	Ind. Term Block	No		150033064	NES48-19-AC5-PS3-DC1E	
		Ind. Term Block	LVBD		150032370	NES48-19-AC5-PS3-DC1E-LVBD	
-48V 600A	400A Infinity S Power System equipped with 12 universal positions and 20 distribution positions selectable between -48V Load and Battery	Ind. Term Block	No		150033067	NES48-19-AC5-PS12-DC1E	
		Ind. Term Block	LVBD		150033075	NES48-19-AC5-PS12-DC1E-LVBD	
-48V 600A	600A Infinity S Power System equipped with 12 universal positions and 40 total distribution positions, 20 of which are selectable between -48V Load and Battery	Ind. Term Block	No		150033072	NES48-19-AC5-PS12-DC2E	
		Ind. Term Block	LVBD		150033080	NES48-19-AC5-PS12-DC2E-LVBD	
Single Voltage Power System -48V, 23" width							
Output Rating	Description	AC Input	LVD	Frame	Ordering Code	Model	Photo
-48V 200A	200A Infinity S Power System equipped with 4 rectifier positions and 26 distribution positions selectable between -48V Load and Battery	Ind. Term Block	No		150029007	NES48-23-AC5-PS4-DC1E	
		Ind. Term Block	LVBD		150029001	NES48-23-AC5-PS4-DC1E-LVBD	
-48V 600A	600A Infinity S Power System equipped with 16 rectifier positions and 26 distribution positions selectable between -48V Load and Battery	Ind. Term Block	No		150029010	NES48-23-AC5-PS16-DC1E	
		Ind. Term Block	LVBD		150029004	NES48-23-AC5-PS16-DC1E-LVBD	
-48V 800A	800A Infinity S Power System equipped with 16 rectifier positions and 52 total distribution positions, 26 of which are selectable between -48V Load and Battery	Ind. Term Block	No		150029012	NES48-23-AC5-PS16-DC2E	
		Ind. Term Block	LVBD		150029006	NES48-23-AC5-PS16-DC2E-LVBD	

Additional Infinity S Configurations are available. Please contact your GE representative for more information.

Dual Voltage Power Systems, 23" width							
Output Rating	Description	AC Input	LVD	Frame	Ordering Code	Model	Photo
 400A	400A Infinity S Power System equipped with 8 universal positions and 26 distribution positions, selectable between -48V Load and +24V Converter Load	Ind. Term Block	No		150033100	NES4824-23-AC5-PS8-DC1E	
		Ind. Term Block	LVBD		150033375	NES4824-23-AC5-PS8-DC1E-LVBD	
 800A	800A Infinity S Power System equipped with 16 universal positions and 52 total distribution positions, 26 dedicated to -48V and 26 of which are selectable between -48V Load and +24V Converter Load	Ind. Term Block	No		150027199	NES4824-23-AC5-PS16-DC2E	
		Ind. Term Block	LVBD		150033295	NES4824-23-AC5-PS16-DC2E-LVBD	
		Ind. Term Block	No		150027200	NES4824-23-AC5-PS16-DC2E-7FTR	
		Ind. Term Block	LVBD		150030947	NES4824-23-AC5-PS16-DC2E-LVBD-7FTR	
 800A	800A Infinity S Power System equipped with 8 universal positions and 26 distribution positions, selectable between +24V Load and -48V Converter Load	Ind. Term Block	No		150033378	NES2448-23-AC5-PS8-DC1E	
		Ind. Term Block	LVBD		150033379	NES2448-23-AC5-PS8-DC1E-LVBD	
 1000A	1000A Infinity S Power System equipped with 16 universal positions and 52 total distribution positions, 26 dedicated to +24V and 26 of which are selectable between +24V Load and -48V Converter Load	Ind. Term Block	No		150027199	NES2448-23-AC5-PS16-DC2E	
		Ind. Term Block	LVBD		150033295	NES2448-23-AC5-PS16-DC2E-LVBD	
		Ind. Term Block	No		150027200	NES2448-23-AC5-PS16-DC2E-7FTR	

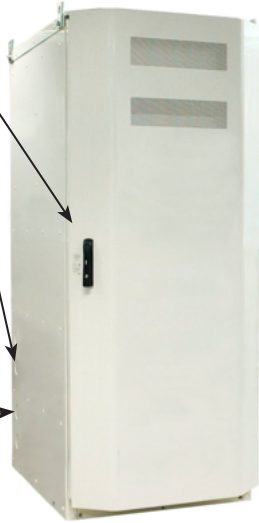
Additional Infinity S Configurations are available. Please contact your GE representative for more information.

Cabinet Specifications

RBA72 Power / Battery Cabinet with 3 strings @ -48 VDC, 540 total Ah

Swing handle with padlock hasp

1" & 2" Conduit knockouts on both sidewalls, lower rear wall, and cabinet floor



Infinity S Power System, Pulsar Plus Controller, DC Distribution (8 RU)

Top Distribution: 48V Only

- 24 Circuit Breaker Positions
- 6 GMT Fuse Positions
- Lower Distribution: 24 or 48V
- 26 Selectable Circuit Breaker Positions

Infinity TE Rectifier (4 RU)

- 350A 48V & 225A 24V Capacity with N+1 Redundancy
- OR
- 550A 48V Capacity with N+1 Redundancy

Note: Rectifier and Converter Modules are not included

Door mounted heat exchanger (electronics cooling)

Available equipment space (2 RU) for RayCap Remote Head Surge Protection

Door mounted ventilation system (battery cooling)

Document storage pockets



- Front Door Assembly
 - Direct Air cooled with variable speed
 - Ventilated battery cooling via door mounted fans
 - Door latch with integrated padlock hasp
 - Fan power and alarm board
- (4) Battery Trays for sized for 6 strings 180Ahr VRLA batteries or 6 strings 150 Ahr Saft batteries
- (4) Battery Heater Pads
- (2) Solid Rear Access Panels
- Multiple 1" & 2" Conduit Knockouts on the Rear and Sides
- AC Terminal Blocks
- (1) Door Alarm – Microswitch & Door Alarm Cabling
- (1) Alarm Interface Block
- (1) Copper Ground Bus
- Ground Straps for the Rear Access Panels
- Intertek Listed
- RoHS Compliant

Battery Compartment

- 3 strings of 155 or 180 Ah batteries @ - 48 VDC
- Equipped with battery heaters
- Batteries are not included
- VRLA or Saft TelX 180 NiCd batteries may be used.

Additional Features

- Sealed to outside air
- 3-point latching mechanism for door
- Removable kick plate for easy install
- (2) Lockable rear access panels
- GR-487 Zone 4 compliant

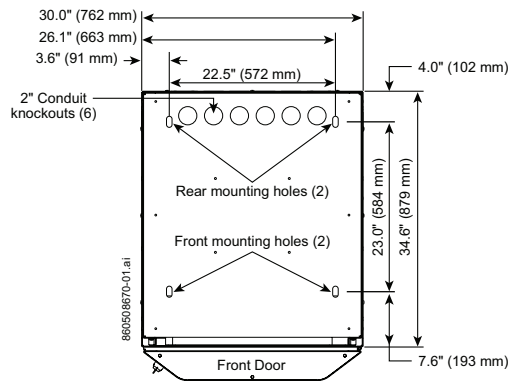
Battery Cabinet

- Electronic compartment
 - GE 14 position circuit breaker panel assembly
 - Bus bar kit that handles (4) sets of 410 AWG
 - (6) 100A battery breakers (trip and alarm off)

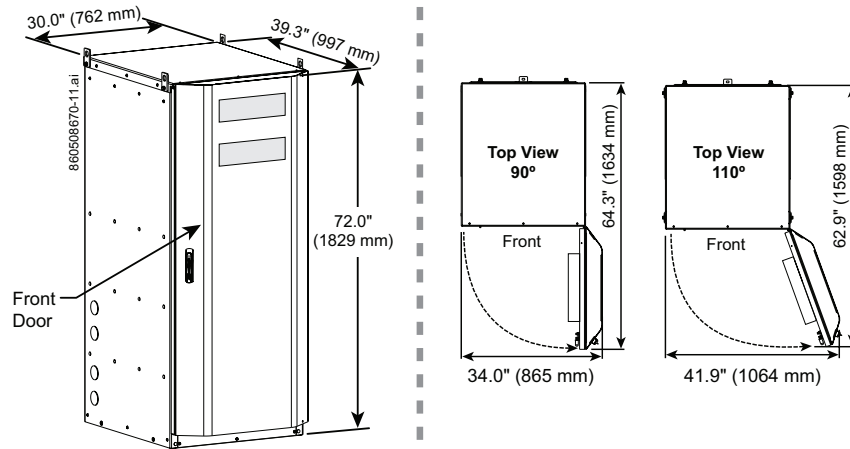
Mechanical	Power Cabinet	Battery Cabinet
Height	72 inches	72 inches
Width	30 inches	36 inches
Depth	39 inches	39 inches
Weight	425 lbs (No batteries or rectifier and converter modules)	350 lbs (No batteries)
Cooling Technology		
Heat Exchanger (electronics), ventilation (batteries)		
Alarms		
Door intrusion, blown fuse, fan fail, AC fail, high temperature, rectifier fail, battery breaker fail, high/low input voltage, battery on discharge		
AC Surge Protection Device		
Not included		
DC Surge Protection Device		
Equipped with Raycap Strikesorb surge protection modules. 30-V1-HV-DMR		

Outline Drawing

RBA Series 30-Inch Wide Cabinet Mounting Footprint







RBA72 Cabinet Dimensions and Door Clearances (90° and 110° Open)



Select RBA72 Power and Battery Cabinet

The following cabinets are designed to support outdoor applications such as LTE growth and overlay deployments. The principle cabinet supports both -48V and +24V loads ideal for mixed mode sites requiring outdoor cabinets. Note: A combined system consisting of the Power Node and Supplemental Battery and has a battery capacity to support up to 355.5A of -48 load capacity. Sites with larger load demands should consider supplementing with an onsite generator, in which case the system will support up to the maximum power system ratings.

RBA72 Power and Battery Cabinets			
Output	Ordering Code	Model	Picture
	150024099	<p>RBA72 Power Node Cabinet</p> <p>Includes the dual voltage Infinity S power system that is rated @ 550A N+1 and is capable of supporting 3 battery strings.</p> <p>Using 3 strings of 180Ahr batteries, the batteries will support 118.5A of load capacity.</p>	
	150024100	<p>RBA72-36 Supplemental Battery Cabinet</p> <p>Supports up to 6 strings of batteries. Battery disconnect panel in top of cabinet supports an individual 100A disconnect per battery string.</p> <p>Using 6 strings of 180Ahr batteries, the batteries will support 237A of load capacity.</p>	

Battery Cabinet Interconnect Kit	
Ordering Code	Description
150032279	<p>RBA72-36 Battery Cabinet Interconnection Kit</p> <p>Consists of the following parts:</p> <ul style="list-style-type: none"> (2) Pipe Nipple, Galv Steel 2" x 4" Long (8) Locknut, Sealing, 2" (1) Pipe Nipple, Galv Steel 1" x 4" Long (4) 1" Sealing Locknut (4) Cable Assy, Power Interconnect, 4/0 AWG (1) Cable, Alarm Extension (6) Probe Interconnect (CC848822321) (6) QS873A Thermal Probe (CC109142980)

GPS 4827 Infinity Power System

-48V DC Medium Power Plant



The GPS4827 capitalizes on the product strengths found in the GPS4848 and Infinity product families by integrating the high efficiency Infinity TE rectifier platform and the time-tested distribution found in the GPS4848. Utilizing the 1U 50A 48Vdc rectifiers, a fully equipped bay only requires 15.75 inches allowing for as much as 54 inches of distribution panels. With this increased density, a single bay GPS4827 system provides ampacity and distribution for most medium and small applications but retains all the features found with the larger GPS4848.

Bay Options

The GPS4827 system can be deployed with capacity of up to 1800 amps in a single cabinet or expanded over multiple cabinets to 2700 amps. Designed for either internal input AC breakers or terminal strip terminations, rectifier shelves can be spread across two bays or concentrated to a single bay. In applications needing additional distribution, two more bays can be added and dedicated exclusively for distribution. For greater flexibility and working space, the GPS4827 may be equipped with a larger 36 inch wide distribution bay to accommodate large cable termination and egress.

Infinity Rectifiers

The Infinity TE rectifier series offers modules for use in -48Vdc applications.

Galaxy Pulsar* Plus Controller

As an economical alternative, the GPS4827 can be equipped with the Pulsar Controller. Designed to monitor and control system components including rectifier's converters and distribution modules via a multi-drop RS485 digital communications bus. System status, parameters settings and alarm thresholds can be viewed and configured from the controller's front panel or PC interface.

Features and Benefits

- Medium power applications utilizing single-phase or 3-phase 240Vac input
- Full featured control and monitoring capability
- 1800 Amp capacity per bay
- Efficiency approaching 97%

Reliability

- Distributed fault tolerance
- Proven field performance
- Controller continuity

Intelligence

- Industry leading controller features
- Ethernet interface for remote access
- Centralized network management

Investment Protection

- Module compatibility
- Power shelf growth
- Flexible upgrade options

On Time Delivery

- 4 - 6 week availability
- 24/7 technical support
- Standard building blocks

Cabinet Specifications

Mechanical	
Height	84.0 inches (2,134mm)
Width	23.6 inches (600mm)
Depth	23.6 inches (600mm)

Thermal	
12 Rectifiers	1,368W (4632 BTU/hr)
24 Rectifiers	2,736W (9264 BTU/hr)
36 Rectifiers	4,104W (13,896 BTU/hr)

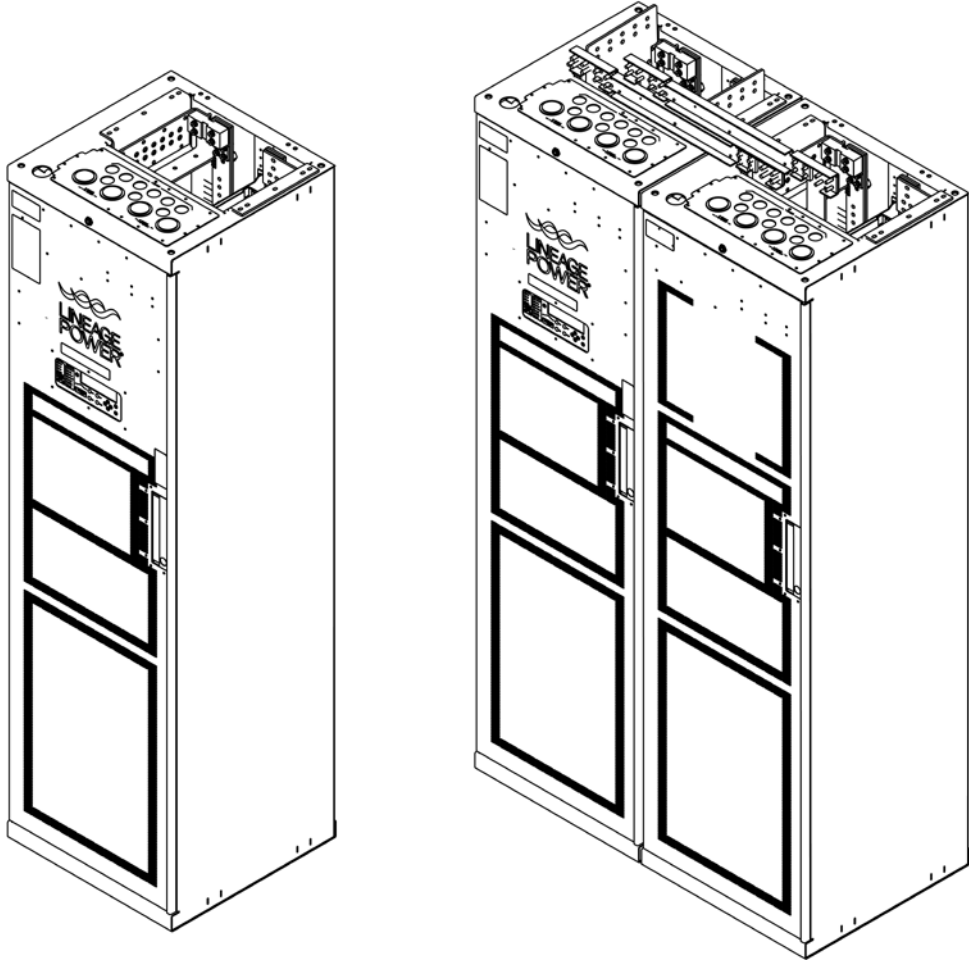
Environmental	
Operating Temperature Range	0°C to +45°C (32°F to 113°F)
Operating Relative Humidity	< 95% non-condensing
Storage Temperature Range	-40°C to +85°C (-40°F to 185°F)
EMC	FCC and CISPR22 (EN55022) Class A
Immunity	GR1089, EN55024

Agency Certifications	
UL	Canada/US UL60950/UL1801
EMI/EMC	CISPR class B conducted and radiated

AC Input Specifications









FOR CODE	NAME PLATE RATING (INPUT CURRENT)	EXTERNAL BREAKER		CONDUIT QTY & SIZE	WIRE SIZE (BASED ON WIRE RATED 75 C)	GROUND WIRE (BASED ON WIRE RATED 75 C)
		SIZE	QTY			
G026	12 AC FEED AT 15A EACH, 200 VAC	20A	(12) 2-POLE	1 (2")	(24) 8 AWG	(1) 8 AWG
	12 AC FEED AT 15A EACH, 200 VAC	20A	(12) 2-POLE	2 (1.5")	(24) 8 AWG	(2) 8 AWG
	12 AC FEED AT 15A EACH, 200 VAC	20A	(12) 2-POLE	4 (1")	(24) 10 AWG	(4) 10 AWG
	6 AC FEED AT 30A EACH, 200 VAC	40A	(6) 2-POLE	2 (1")	(12) 8 AWG	(2) 8 AWG
G028	36 AC FEED AT 15A EACH, 200 VAC	20A	(36) 2-POLE	4 (1.5")	(72) 8 AWG	(4) 8 AWG
	36 AC FEED AT 15A EACH, 200 VAC	20A	(36) 2-POLE	3 (2")	(72) 8 AWG	(3) 8 AWG
	36 AC FEED AT 15A EACH, 200 VAC	20A	(36) 2-POLE	9 (1")	(72) 10 AWG	(9) 10 AWG
	18 AC FEED AT 30A EACH, 200 VAC	40A	(18) 2-POLE	3 (2")	(36) 4 AWG	(3) 6 AWG
	12 AC FEED AT 45A EACH, 200 VAC*	60A	(12) 2-POLE	4 (1.5")	(24) 4 AWG	(4) 6 AWG

*Requires (8) CC408641204 AC Strapping Kits



Select GPS4827 Power Bays

Note: Even though all NE based rectifiers utilize single phase input, the GPS bays are designed to accept 3 phase input when the bulk feed (G021 or G022) is selected.

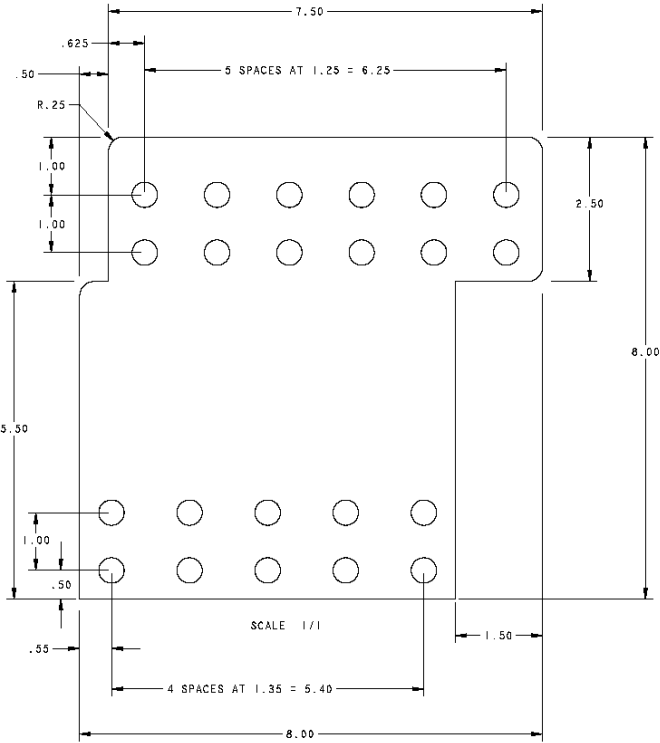
Output	Ordering Code	Model	AC Input		Picture
 1800A	150024267	GPS 4827 Primary Bay, Pulsar controller, terminal strip feed 208-240V AC input for up to 36 NE050 rectifiers, battery shunt	 PHS - PHS or PHS - N	 36 AC Feeds	 Vertical Distribution Available 48"
		H5694827G001, G012, G028			
Secondary Bays					Picture
 600A	150033463	GPS 4827 Secondary Bay, no controller, terminal strip feed 208-240V AC input for up to 12 NE050 rectifiers, external tie bar kit 5000A (ASG)	 PHS - PHS or PHS - N	 12 AC Feeds	 Vertical Distribution Available 59"
		H5694827G003, G026 w/5000A Tie Bar			

Select Field Installed Distribution Panels

Breaker Panels					
Ordering Code	Group Code	Panel Description	Vertical Space (in.)	Internal Return Bars (Dist Arch Only)	Group Code
108971474	G43A	6 Position 125A-800A Circuit Breaker Panel	12	108908070	G43
108987678	G98B	22 Position 3A-200A Bullet Breaker Panel	9	108908104	G98B
Fuse Panels					
CC109133113	G53A	2 Position 70A-600A TPL Fuse Panel	6	108908104	G53
108985235		6 position 1A-15A GMT Fuse Panel	0	NA	NA

Select Battery Termination Options

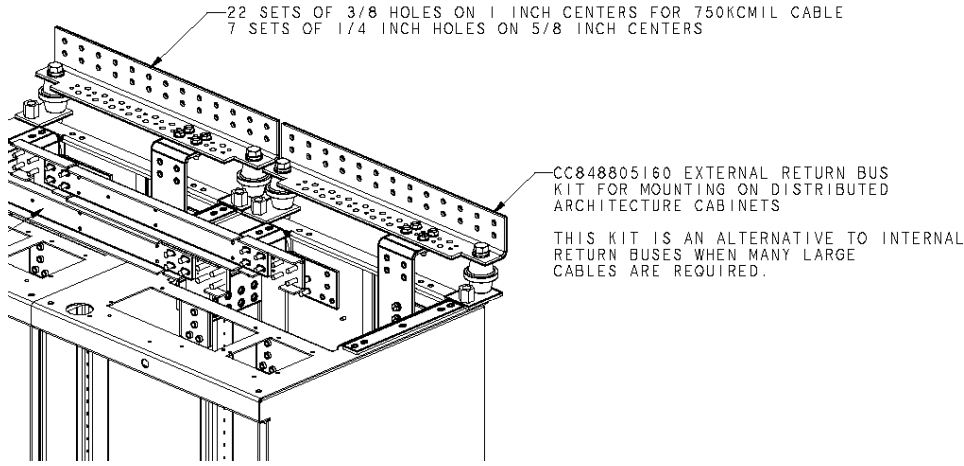
Order optional termination bar if standard 8 positions may be exceeded	
Ordering Code	Description
850019233	Optional bus bar that provides 16 output terminations. (one required per cabinet)



The technical drawing shows a rectangular bus bar with a total width of 8.00 inches and a total height of 8.00 inches. The top section has a width of 7.50 inches and contains two rows of six circular holes each. The distance between the center of the first hole and the center of the last hole in the top row is 6.25 inches, calculated as 5 spaces at 1.25 inches each. The vertical distance between the two rows of holes is 2.50 inches. The bottom section has a width of 8.00 inches and contains two rows of five circular holes each. The distance between the center of the first hole and the center of the last hole in the bottom row is 5.40 inches, calculated as 4 spaces at 1.35 inches each. The vertical distance between the two rows of holes in the bottom section is 1.00 inch. The overall height of the bar is 8.00 inches, with a top section height of 5.50 inches and a bottom section height of 2.50 inches. The drawing includes a scale of 1/1 and various dimension lines and callouts.

Select Optional Return Bus Bars











Standard Architecture 600mm Bays	
Ordering Code	Description
CC848805160	External Return Bus Kit: Option for termination of all distribution return cables. 1 per cabinet, rated at 1800 Amps. The external return bus kit is an alternative to internal return buses when many large cables are required.









The 3D perspective view shows the external return bus kit (CC848805160) mounted on a cabinet. The kit consists of a long metal bar with two rows of holes. The top row has 22 sets of 3/8 inch holes on 1 inch centers for 750kcmil cable. The bottom row has 7 sets of 1/4 inch holes on 5/8 inch centers. The kit is shown mounted on a cabinet with a distributed architecture. The text indicates that this kit is an alternative to internal return buses when many large cables are required.


Select Rectifiers and Converters

Note: GPS4827 utilize 48Vdc Rectifiers only.

Rectifiers			
	Ordering Code	Model	Photo
 100A	CC109160834	95 - 145Vac input, 24V, 44A output (max. 50A@24V) 175 - 275Vac input, 24V, 100A output (max. 114A @24V) 145 - 175 linear output increase from 44A to 100A NE100AC24ATEZ	
 100A	150025075	95 - 145Vac input, 24V, 44A output (max. 50A@24V) 175 - 275Vac input, 24V, 100A output (max. 114A @24V) 145 - 175 linear output increase from 44A to 100A 100 - 310 VDC input from Solar resource with full power above 250VDC. NE100ECO24ATEZ	
 75A	CC109163473	95 - 145Vac input, 48V, 22A output (max. 25A@48V) 175 - 275Vac input, 48V, 75A output (max. 85A@48V) 145 - 175 linear output increase from 22A to 75A NE075AC48ATEZ	
 50A	CC109158878	95 - 145Vac input, 48V, 22A output (max. 25A @48V) 175 - 275Vac input, 48V, 50A output (max. 57A @48V) 145 - 175 linear output increase from 22A to 50A NE050AC48ATEZ	
 50A	150025074	95 - 145Vac input, 48V, 22A output (max. 25A @48V) 175 - 275Vac input, 48V, 50A output (max. 57A @48V) 145 - 175 linear output increase from 22A to 50A 100 - 310 VDC input from Solar resource with full power above 250VDC. NE050ECO48ATEZ	










Converters			
	Ordering Code	Model	Photo
 30A	CC109112471	21-30Vdc input, 48V, 30A output NE030DC48A	
 40A	150023619	21-30Vdc input, 48V, 40A output NE040DC48AZ	
 75A	CC109142881	42-60Vdc input, 24V, 75A output NE075DC24A	

Select Alarm Cables

Alarm Cables		
Ordering Code	Model	Photo
CC848817651	50ft Auxiliary input alarm cable for Pulsar Plus Controller	
CC848817635	50ft alarm cable for Pulsar Plus Controller	
CC848817643	150ft alarm cable for Pulsar Plus Controller	



Select Distribution Components



Note: All systems support plug-in (bullet style) breakers or fuse modules. Larger breakers can be 2 or even 3 poles. The multi-pole breakers MUST be used with the appropriate multi-pole adapter to parallel the poles for proper operation.


Bullet Style Load Circuit Breakers				Photo
Ordering Code	Amperage	CB Positions (Poles)	Min Wire Gauge	
407998137	3	1	10	
407998145	5	1	10	
407998152	10	1	10	
407998160	15	1	10	
407998178	16	1	10	
407998186	20	1	10	
407998194	25	1	10	
407998202	30	1	10	
408213486	40	1	8	
407998210	45	1	8	
407998228	50	1	6	
407998236	60	1	6	
407998244	70	1	2	
407998251	80	1	2	
407998269	90	1	2	
407998277	100	1	2	
CC848808551	100	2	2	
408185353	125	2	2	
408185346	150	2	1/0	
408564941	200	3	2/0	
CC408573975	225	3	4/0	
408535752	250	3	4/0	
CC848756916	2-pole Adapter bus for 100-150A breakers; used for 1/4"-20 on 5/8" lugs (order 2 per 2 pole breaker to accommodate load and return lugs) Infinity M & S only			
850021775	2-pole Adapter bus for 100-150A breakers; used for 3/8" on 1" lugs (order 2 per 2 pole breaker to accommodate load and return lugs) Infinity M & S only			
CC848756924	3-pole Adapter bus for 200-250A breakers; off-center connection (order 2 per 3 pole breaker to accommodate load and return lugs) Infinity M & S only			
850021955	3-pole Adapter bus for 200-250A breakers; centered connection (order 2 per 3 pole breaker to accommodate load and return lugs) Infinity M & S only			
848631479	2-pole adapter bus kit (includes bus for 1/4" hole lug on 5/8" centers and hardware), order one per breaker GPS 4827 only			
848745662	3-pole adapter bus kit (includes bus for 5/16" hole lug on 1" centers and hardware), order one per breaker GPS 4827 only			

Note: For 70-100A single pole breakers, one breaker space must be left open in the adjacent position when powering breaker above 80% capacity under normal loading conditions.

Select Distribution Components (continued)




Bullet Battery Circuit Breakers (Yellow Handle) (Alarms on Mid-trip and in Off position) (Infinity S systems only)				
Ordering Code	Amperage	CB Positions (Poles)	Min Wire Gauge	Photo
CC408574404	125	2	2	
CC408574420	200	2	2/0	
CC109106548	100A battery bullet bus strap (substitute for battery breaker)			

Bullet Style GMT Fuse Holder and GMT Fuses				
Ordering Code	Amperage			Photo
405006222	0.25A			
3150439	0.5A			
401841473	1A			
405673146	1.33A			
405181983	2A			
406976985	3A			
406159061	5A			
405725433	7.5A			
406159236	10A			
407845197	12A			
406473959	15A			
CC109103157	6-pos GMT Bullet Fuse Holder (Requires 2 bullet positions) Infinity M & Infinity S Only			

Bullet Style Fuse Holder and TPS Fuses – Infinity M & Infinity S Only				
Ordering Code	Amperage	WP-92461 List	Min Wire Gauge	Photo
406700617	15	104	10	
406700625	20	105	10	
406700633	25	106	10	
406700641	30	107	10	
406700658	40	108	10	
406700674	50	109	8	
406700682	60	110	6	
406700690	70	111	6	
406794784	100	3	2	
402328926	0.18 Alarm Fuse			

Select Distribution Components (continued)

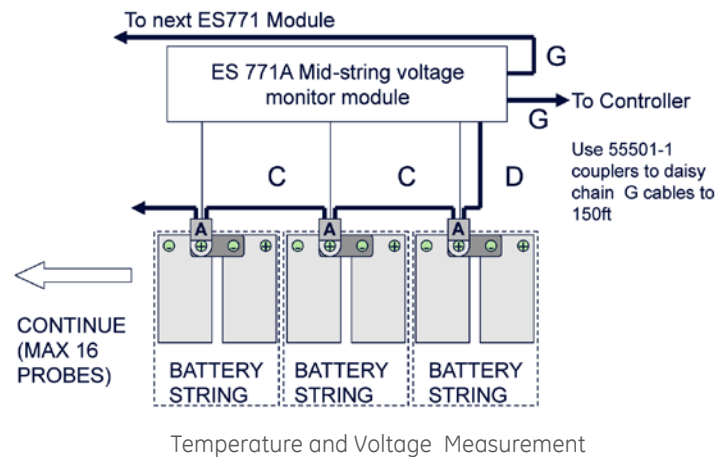
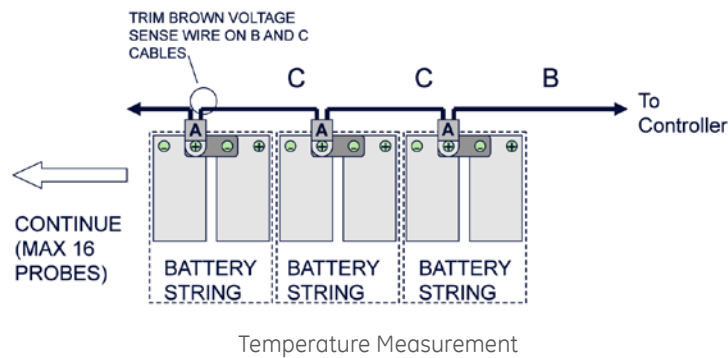
Large TPL Fuses - GPS4827 Only				
Ordering Code	Amperage	Max # wires per position	Min Wire Gauge	Photo
408472322	70-250A Fuse Holder Head (only required for 2 Position 70A-600A TPL Fuse Panel)			
406622456	300-600A Fuse Holder Head (only required for 2 Position 70A-600A TPL Fuse Panel)			
402328926	0.18A Alarm Fuse			
406794776	70	3	6	
408239648	80	3	4	
406794784	100	3	2	
406925685	125	3	2	
406794792	150	3	1/0	
406794818	200	3	4/0	
406794982	225	3	4/0	
406794842	250	3	4/0	
406794867	300	3	2 x 4/0	
406794875	400	3	2 x 4/0	
406794883	500	3	2 x 4/0	
406794891	600	3	3 x 4/0	

Terminal Lugs for Bullet Style Breakers and TPS Fuses (1/4" bolt on 5/8" centers) - Infinity M & Infinity S Only				
Ordering Code	STR Wire GA (Class B)	Flex Wire GA (Class I)	WP-91412 List	Photo
406021626	8	8	75	
405347519	6	6	3	
405347576	4	4	5	
405348202	2	-	54	
405347683	-	2	8	
Terminal Lugs for Battery and Large Breakers (3/8" bolt on 1" centers)				
406338665	2	-	-	
405348228	1/0	-	-	
405348236	2/0	1/0	-	
406021725	-	2/0	-	
405348251	4/0	-	-	
405347923	-	4/0	-	
Terminal Lugs for Battery and Large Breakers (3/8" bolt on 1" centers) - Large Wire Lugs for Infinity M				
407890763	350	-	-	
407890748	-	350	-	
406335141	750	-	-	
407890730	-	750	-	

Select Battery Monitoring

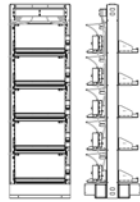
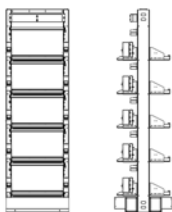
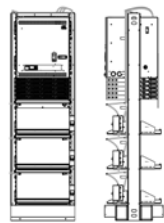
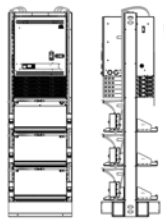
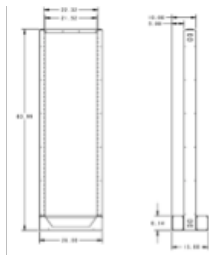

Ordering Code	Description	Photo
CC109142980	QS873A Thermal Probe (A)	
150026698	QS873B Ambient Thermal Probe (A)	
CC848817024	10 ft wire set (B: thermal probe to controller)	
CC109157434	20 ft wire set (B:thermal probe to controller)	
CC848822560	1 ft wire set (C: thermal probe to thermal probe)	
848719803	5 ft wire set (C: thermal probe to thermal probe)	
CC848822321	10 ft wire set (C: thermal probe to thermal probe)	
850027334	20 ft wire set (C: thermal probe to thermal probe)	
108958422	ES771A Battery Voltage Monitor Card	
CC848791517	2-1/2 ft wire set (D: ES771A to thermal probe)	
CC848797290	6 ft wire set (D: ES771A to thermal probe)	
848719829	10 ft wire set (D: ES771A to thermal probe)	
CC848791500	4 ft wire set (G: ES771A to ES771A or controller)	
848652947	10 ft wire set (G: ES771A to ES771A or controller)	
555052-1	In-Line Coupler (for extending item G above)	

Temperature/Voltage probes are needed for battery monitoring. They are connected to each battery or battery string to provide slope thermal compensation, temperature alarms and voltage imbalance alarms.



Select Mounting Frame, Battery Trays, Installation Kit

Note: For Power Systems that are configured WITHOUT a mounting frame and/or battery trays.

Ordering Code	Description	Picture
150029836	Battery Frame 48V; 5 trays with 200A breakers	
150029837	Battery Frame 24V; 5 trays with 200A breakers	
150029839	Battery Frame 48V; 3 trays with 200A breakers Battery shelves, breaker kits, and DC cables with connectors. Does not include the power system or frame.	 Infinity System shown for reference
150029840	Battery Frame 24V; 3 trays with 200A breakers Battery shelves, breaker kits, and DC cables with connectors. Does not include the power system or frame.	 Infinity System shown for reference
CC848828938	7ft high relay rack for mounting 23" wide equipment (Zone 4 to 1800 lbs.)	
CC848842955	23" Battery Tray (22" Depth) Typically Batteries include: East Penn (12A150FT, 12A170FT) Energys (12V155FS, 12V170F) NorthStar (NSB110FT, NSB170FT)	
CC408627533	Infinity Power System Cable and Installation Kit For use with the Infinity M & Infinity D Systems	

Management Visibility

Galaxy Manager* software is the centralized visibility and control component of a comprehensive power management system designed to meet engineering, operations and maintenance needs. The Galaxy Manager client-server architecture enables remote access to system controllers across the power network.

- Dashboard display with one-click access to management information database
- Trend analysis
- Scheduled or on demand reports
- Fault, configuration, asset, and performance management

Training

GE offers on-site and classroom training options based on certification curriculum. Technical training can be tailored to individual customer needs. Training enables customers and partners to more effectively manage and support the power infrastructure. We have built our training program on practical learning objectives that are relevant to specific technologies or infrastructure design objectives.

Service & Support

GE field service and support personnel are trusted advisors to our customers – always available to answer questions and help with any project, large or small. Our certified professional services team consists of experts in every aspect of power conversion with the resources and experience to handle large turnkey projects along with custom approaches to complex challenges. Proven systems engineering and installation best practices are designed to safely deliver results that exceed our customers' expectations.

Warranty

GE is committed to providing quality products and solutions. We have developed a comprehensive warranty that protects you and provides a simple way to get your products repaired or replaced as soon as possible.

For full warranty terms and conditions please go to www.gecriticalpower.com.



imagination at work

CPB-DAS, Rev. 06/14

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