

827E Inverter System

- 48V input , scalable up to 28.8KVA @ 120Vac
- +24V input , scalable up to 4200VA @ 120Vac
- 48V input , scalable up to 28.8KVA @ 230/240Vac



System Solutions

The GE 827E is an N+1 redundant and expandable source of AC power for the telecommunications industry. The highly reliable AC power output is robust enough to handle linear and nonlinear loads with low power factors such as personal computers, servers and modems. Inverter modules operating in parallel eliminate the need for a second AC source of power.

Compact Scalable Design

A complete system requires only 5U of space. It can be configured with a minimum of inverter units sized to meet the immediate need, and grown as required. This allows for the low initial deployment costs, but retains expandability to serve future needs. Combined with user defined input choices and a compact foot print (8.75"H x 15"D), the 827E inverter is able to adapt to varying needs and requirements.

Shelf / System Options

The 827E can be configured in 19" or 23" wide framework. Both 24Vdc and -48Vdc shelves can utilize as little as 5U of rack space. Each shelf is a complete system including a controller and distribution monitor. The 19" shelf can hold up to four inverter modules and the 23" system can hold up to six. The -48Vdc system can be expanded to a four shelf arrangement for applications requiring as much as 28.8KVA of 120Vac, 230V/50Hz or 240V/60Hz.

Maintenance Bypass and AC Distribution panels are optional equipment.

Intelligent Controller

The 827E controller features a 2 line x 16 character backlit LCD and 4-button navigation. Front panel status indicators

and 4 alarm extensions provide system conditions. The controller can be accessed through the front panel craft port or optional modem connectivity.

Features and Benefits

Reliability

- Distributed fault tolerance
- Proven field performance
- Controller continuity

Intelligence

- Industry leading controller features
- Modem option 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

- Modular design lowers initial deployment costs
- Compact depth allows for a broad range of placement options
- True sine wave output
- Patented forced load share without LSO
- Quickly backup and restore system configuration



827E Inverter Module



The 827E inverter modules provide a highly reliable source of AC power for the telecommunications industry.

The 827E can be purchased with +24Vdc or -48Vdc input. This feature broadens the range of applications to include both wireline and wireless applications. The +24Vdc solution is sized to support various cell site applications including wireless backhaul. The +24Vdc version of the 827E can provide 4.2KVA of 120Vac. The -48Vdc product is designed to utilize the local -48Vdc power supply. Its scalable architecture can serve applications requiring as much as 28.8KVA of 120Vac, 230V/50Hz or 240V/60Hz in a 4 shelf arrangement.

Applications

The 827E can be used anywhere high quality 120Vac is needed. Applications may include any of the following:

- Central Office
- Wireless base stations
- CCTV
- Critical servers, PC's, modems & gateway devices
- Gates & card readers
- On premise telephone systems
- Diagnostic & test equipment
- HVAC facility management controllers

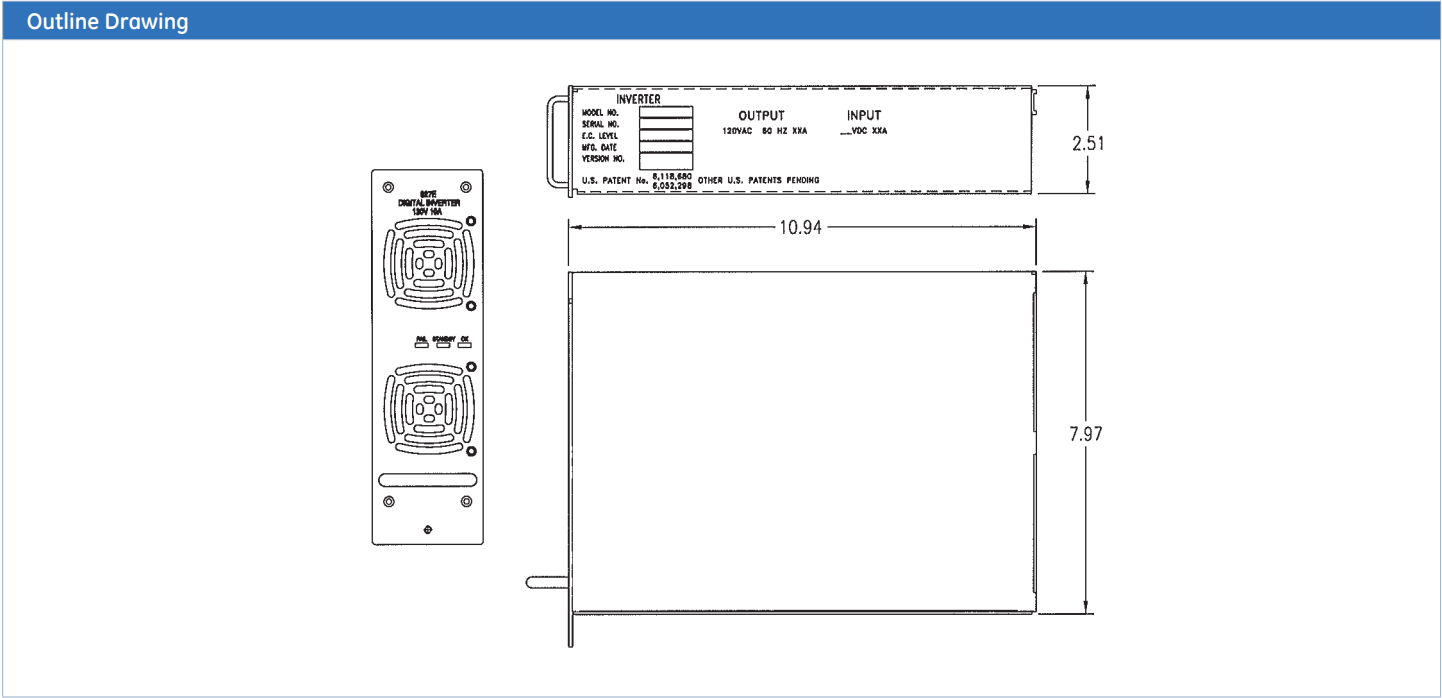
Key Features

- -48V input, scalable up to 28.8KVA @ 120Vac, 230V/50Hz or 240V/60Hz
- +24V input, scalable up to 4200VA @ 120Vac
- Hot-swappable, redundant inverter modules
- Optional Maintenance Bypass Panel
- Dial-up access with optional modem
- Optional AC Distribution Panel
- Voltage THD less than 3%
- Front panel LED indicators

Specifications

Input	SI10A120PME	SI5A120PME	SI5A240PME	SI5A230PME50
Startup Voltage Requirement	-49.5Vdc	+24.75Vdc	-49.5Vdc	-49.5Vdc
Operational Voltage	-42 to -60Vdc	+21 to +32Vdc	-42 to -60Vdc	-42 to -60Vdc
Current	32A per inverter	32A per inverter	32A per inverter	32A per inverter
Recommended input fuse/cb	40 per module	40 per module	40 per module	40 per module
Output				
Voltage	120Vac	120Vac	240Vac	230Vac
Frequency	60Hz	60 Hz	60 Hz	50 Hz
Current	1200W per inverter 8400W per shelf 28.8KW per system	600W per inverter 4200W per shelf 3600W per system	1200W per inverter 8400W per shelf 28.8KW per system	1200W per inverter 8400W per shelf 28.8KW per system
Heat Dissipation	778 BTU/hr	389 BTU/hr	778 BTU/hr	778 BTU/hr
Environmental				
Operating Temperature	-40°C to +65°C (-40°F to 149°F)			
Storage Temperature	-40°C to +85°C (-40°F to 185°F)			
Humidity	< 95% non-condensing			
Altitude	4800 feet			

Mechanical	
Length (inch/mm)	10.94/ 277.9
Width (inch/mm)	2.51/ 63.8
Height (inch/mm)	7.97/202.4
Weight (lb/Kg)	6.5/2.9
Safety and Standards Compliance	
NEBs Level 3	Evaluated by independent NRTL test lab to Telcordia GR63, Issue 2 & GR 1089, Issue 3
Safety	ANSI/UL 60950-1 CAN/CSA C22.2 60950-1
RoHS	EU Directive 2002/95/EC



Ordering Information – 827E Inverter System

Ordering Guide

The 827E can be configured in 19" or 23" wide framework. Both 24Vdc and -48Vdc shelves can utilize as little as 5U of rack space. Each shelf is a complete system including a controller and distribution monitor. The 19" shelf can hold up to four inverter modules and the 23" system can hold up to six.



The -48Vdc system can be expanded to a four shelf arrangement for applications requiring as much as 28.8KVA of 120Vac, 230Vac or 240Vac. Maintenance Bypass and AC Distribution panels are optional equipment.

Features



- Inverter modules for +24V and -48V applications
- Modular architecture for easy growth and low cost
- Maintenance Bypass Panel option
- AC Distribution Panel Option
- 19" shelf holds 4 inverter modules
- 23" shelf holds 6 inverter modules



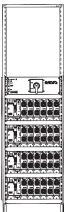
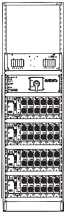

Step 1: Select Inverter System




Primary Voltage Stand-Alone Systems			
Input	Ordering Code	Equipment Description	Picture
-48V	657827E-19	-48Vdc Input, 120Vac Output Basic 4.8KVA inverter system cage, 19" rack mounting 5 Rack Unit equipped with intelligent controller module and AC distribution module. Can accommodate up to 4 inverter modules. J438827E L4	
-48V	657827E-23	-48Vdc Input, 120Vac Output Basic 7.2KVA inverter system cage, 23" rack mounting 5 Rack Unit equipped with intelligent controller module and AC distribution module. Can accommodate up to 6 inverter modules. J438827E L3	
-48V	150026250	-48Vdc Input, 230/240Vac Output Basic 4.8KVA inverter system cage, 19" rack mounting 5 Rack Unit equipped with intelligent controller module and AC distribution module. Can accommodate up to 4 inverter modules J438827E L706	
-48V	150026249	-48Vdc Input, 230/240Vac Output Basic 7.2KVA inverter system cage, 23" rack mounting 5 Rack Unit equipped with intelligent controller module and AC distribution module. Can accommodate up to 6 inverter modules. J438827E L705	
+24V	657827E-1924	24Vdc Input, 120Vac Output Basic 2.4KVA inverter system cage, 19" rack mounting 5 Rack Unit equipped with intelligent controller module and AC distribution module. Can accommodate up to 4 inverter modules. J438827E L9	
+24V	657827E-2324	24Vdc Input, 120Vac Output Basic 3.6KVA inverter system cage, 23" rack mounting 5 Rack Unit equipped with intelligent controller module and AC distribution module. Can accommodate up to 6 inverter modules. J438827E L8	

The following shelves allow a user to directly interface with a GE power system that features a Galaxy Pulsar Plus system controller. These shelves can operate with +24V or -48V input inverters and output 120V, 240V, or 230V - 50Hz. These are not intended for stand-alone use.



Galaxy Protocol Universal Inverter Shelves			
Input	Ordering Code	Equipment Description	Picture
-48V OR +24V	150033358	Basic 8.4kVA (-48V Input) and 4.2kVA (+24V Input) System Cage 23" Rack mounting 5 Rack Unit equipped with GP interface and AC disconnect module. Can accommodate up to 7 inverter modules. J438827E L803	
-48V OR +24V	150033359	Basic 6kVA (-48V Input) and 3kVA (+24V Input) System Cage 19" Rack mounting 5 Rack Unit equipped with GP interface and AC disconnect module. Can accommodate up to 5 inverter modules. J438827E L804	

Step 1: Select Inverter System (cont.)

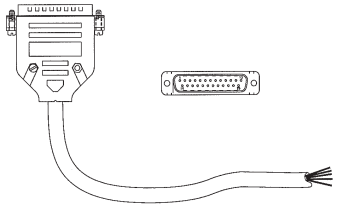
Primary Voltage Systems			
Input	Ordering Code	Equipment Description	Picture
-48V	687827E-3M (3) inverter shelves 687827E-4M (4) inverter shelves	Inverter system equipped with maintenance bypass panel (MBP), 23" rack mounting. MBP, 4 Rack Unit and 1 to 4 inverter cages, 5 Rack Unit equipped with intelligent controller module and AC distribution module. 1-position blank panel separating each component. Can accommodate up to 6 inverter modules per inverter shelf equipped. 687827E-3M : J438827E (3) L3, L52, L53, L54, L55, L502, (3) L600, WITH 6401608P 687827E-4M : J438827E (4) L3, L52, L53, L53, L55, L56, L502, (4) L600, WITH 6401608P-3	
-48V	687827E-1MD (1) inverter shelf 687827E-2MD (2) inverter shelves	Inverter system equipped with maintenance bypass panel (MBP) & AC distribution panel, 23" rack mounting. MBP & AC distribution panels, 4 Rack Units/each and 1 to 4 inverter cages, 5 Rack Unit equipped with intelligent controller module and AC distribution module. 1-position blank panel separating each component. Can accommodate up to 6 inverter modules per inverter cage equipped. 687827E-1MD : J438827E L3, L51, L53, L502, L600, WITH 6401628P-1, 6401517P 687827E-2MD : J438827E (2) L3, L52, L53, L54, L502, (3) L600, WITH 6401608P-2, 6401722P	
-48V	687827E-1MB (1) inverter shelf 687827E-3MB-A (3) inverter shelves 687827E-4MB (4) inverter shelves	Inverter system equipped with maintenance bypass panel (MBP) & bulk input, 23" rack mounting. MBP, 4 Rack Unit and 1 to 4 inverter cages, 5 Rack Unit equipped with intelligent controller module and AC distribution module. 1-position blank panel separating each component. Can accommodate up to 6 inverter modules per inverter cage equipped. 687827E-1MB: J438827E L3, L51, L53, L502, (4) L600, L602, (2) L603, WITH 6380013P-23, 6180223P-1, 6190036P-5, 6401628P-1, 6401629P-1, 6420018P, (6) 6420025P 687827E-3MB-A: J438827E (3) L3, L52, L53, L54, L55, L502, (5) L600, (3) L603, WITH 6180223P-1, 6190036P-5, 6380027P, 6401601P, 6401608P, 6420018P (18) 6420025P 687827E-4MB: J438827E (4) L3, L52, L53, L54, L55, L56, L502, (7) L600, (2) L603, WITH(2) 6180223P-1, 6190036P-5, 6380027P, 6401608P-3, 6401629P, 6420018P, (24) 6420025P	

Standalone Inverters			
Input	Ordering Code	Equipment Description	Picture
-48V	CC109165115 SI10A120SA	Standalone 1.2KVA Inverter Shelf, 19" rack mount, 120Vac 60Hz, 10A, -48Vdc input with 2 NEMA 5 outlet plugs Inverter and Shelf - L16 Inverter Only - L725	
-48V	150031529 SI5A230SA50	Standalone 1.2KVA Inverter Shelf, 19" rack mount, 230Vac 50Hz, 5A, -48Vdc input with terminal block output. Inverter and Shelf - L708 Inverter Only - L727	
-48V	150031045 SI5A240SA	Standalone 1.2KVA Inverter Shelf, 19" rack mount, 240Vac 60Hz, 5A, -48Vdc input with terminal block output. Inverter and Shelf - L709 Inverter Only - L726	

Step 2: Select Inverters

Inverters				
Input	Ordering Code	Description	List	Photo
	SI10A120PME	-48Vdc input , 120Vac output @ 10Amps	L11	
	SI5A120PME	+24Vdc input , 120Vac output @ 5Amps	L14	
	SI5A230PME50	-48Vdc input , 230Vac output @ 5Amps	L723	
	SI5A240PME	-48Vdc input , 240Vac output @ 5Amps	L722	
	150031530	Blank module	L15	


Step 3: Select Alarm Cables


Alarm Cables			
Ordering Code	Model	List	Photo
6370213P-9	Alarm cable, 25-pin male, 9 foot	L26	
6370213P-20	Alarm cable, 25-pin male, 20 foot	L29	
6370213P-60	Alarm cable, 25-pin male, 60 foot	L30	
6370213P-100	Alarm cable, 25-pin male, 100 foot	L31	
6370213P-150	Alarm cable, 25-pin male, 150 foot	L32	

Step 4: Select Monitoring Options

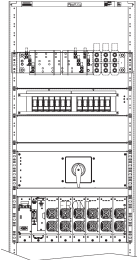
Monitoring Options		
Ordering Code	Model	List
6820014P	Envision Software Kit	L20

Step 5: Select AC Distribution Options

AC Distribution Panel (Optional)			
Ordering Code	Description	List	Photo
6180498P	AC Distribution Panel (12) AC Distribution positions	L70	

Circuit Breakers			Photo
Ordering Code	Amperage	Positions (Poles)	
3050081P-10	10A	1	
408506855	15A	1	
408550776	20A	1	
3050081P-25	25A	1	
3050081P-30	30A	1	
3050081P-35	35A	1	
3050081P-40	40A	1	
3050081P-45	45A	1	
3050081P-50	50A	1	
3050081P-60	60A	1	
3050081P-70	70A	1	


Step 6: Select Bulk DC Input

DC Input Kit Assembly (Optional)			
Ordering Code	Description	List	Photo
642827ETPSDCPK	Bulk DC Input Panel with 6+6 TPS fuse positions, ground return bus, Lexan rear cover, for 23" relay rack mounting. Includes: - 6190036P-5 - 6170078P-5 - 6380027P - 6401643P-3 - 4362329P-11 - 4362328P-11		 • Shown for reference only

Step 7: DC Input Cable Kits

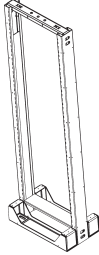
DC Input Kit Assembly (Optional)	
Ordering Code	Description
150036125	Cabling kit to connect a single 23" inverter shelf to an Infinity M Power Plant. Compatible with: 657827E-23, 150026249 and 657827E-2324
150036126	Cabling kit to connect a single 23" inverter shelf to an Infinity M Power Plant. Compatible with: Controller-less 23" inverter shelves 827E, NE M DC Input, 23IN 7-Pos
150036127	Cabling kit to connect a single 19" inverter shelf to an Infinity M Power Plant. Compatible with: 657827E-19, 150026250 and 657827E-1924
150038128	Cabling kit to connect a single 19" inverter shelf to an Infinity M Power Plant. Compatible with: Controller-less 19" inverter shelves 827E, NE M DC Input, 19IN 5-Pos

Step 8: Select Maintenance Bypass Options

Maintenance Bypass Panel (MBP)			Photo
Ordering Code	Description	List	
6310408P-1	30 KVA Maintenance Bypass Panel (Only available on -48V Input, 120V Output systems)	L52	
6310408P	10 KVA Maintenance Bypass Panel (Only available on -48V Input, 120V Output systems)	L51	
6370413P	Alarm Cable, Ribbon to 1st Inverter Shelf	L53	
6370413P-1	Alarm Cable, Ribbon to 2nd Inverter Shelf	L54	
6370413P-2	Alarm Cable, Ribbon to 3rd Inverter Shelf	L55	
6370413P-3	Alarm Cable, Ribbon to 4th Inverter Shelf	L56	
6401608P-1	Wiring List, MBP to (1) Inverter Shelf		
6401608P-2	Wiring List, MBP to (2) Inverter Shelves		
6401608P	Wiring List, MBP to (3) Inverter Shelves		
6401608P-3	Wiring List, MBP to (4) Inverter Shelves		

Note: MBP alarm cable(s) & wiring list(s) required to connect MBP to inverter system.



Step 9: Select Framework

Relay Rack			Photo
Ordering Code	Description	List	
6270008EQCG	Zone 4 Relay Rack, 7.0', 23" Note: Compatible frame for systems equipped with AC Distribution, Bulk DC Input and/or Maintenance Bypass Panels (Step 5 - 8).	L502	
CC848828938	Zone 4 Relay Rack, 7.0', 23" Only for use with standard inverter shelves. Cannot be used with systems equipped with Maintenance Bypass Panels (Step 8).		
CC848842641	23" Kickplate (for 15" Depth) for CC848828938 Relay Rack		
CC848852260	23" Kickplate (for 24" Depth) for CC848828938 Relay Rack		

Step 10: Select Filler Panels

Filler Panels		
Ordering Code	Description	List
4362326P-11	Blank panel, 1RU, 23"	L600

Spares

Spare Modules			
Ordering Code	Description	List	Photo
6180443PE	Intelligent Controller Module	L43	
150027444	Distribution Monitor Module/Disconnect for -48V Shelf	L40	
150028440	Distribution Monitor Module/Disconnect for +24V Shelf	L45	
850027237	Distribution Monitor Module/Disconnect for 230/240VAC Shelves	L755	

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.



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