GE Energy

PRODUCT OVERVIEW

Secondary DC Distribution

-48V Battery Distribution Bay, BDFB / BDCBB

- Telecom Central Office and MTSO Applications
- 800 Amp load centers – From one to six panels with a capacity up to 4800 Amps per cabinet
- Digital meter interface
- No Spacing Restrictions on Fuse and Circuit Breaker Protectors

Overview

The GE Energy Battery Distribution Fuse Bay (BDFB) or Battery Distribution Circuit Breaker Bay (BDCBB) serves as a secondary power distribution unit for -48V DC power from the battery plant to the load equipment. The H569-445 family of products is versatile with fuse and circuit breaker options, internal or external DC return bars, 800A, 28-position panels and a VIM1 smart meter to monitor voltage and current of each load bus.

Cabinet Options

The cabinet for the BDFB / BDCBB is 7ft, seismic zone 4 rated, with up to six 28-position distribution panels. Each panel may be individually fed with an 800A load bus or multiple panels may be joined together. Load bus assemblies include a 1500A shunt and landings for two 750kcmil cables. Factory supplied shunt wiring to each panel allows cabinets to be transitioned into different load configurations in minutes for maximum flexibility.

1, 2 and 4 ½ foot tall cabinet extensions are available for various cable rack heights.

Fuse / Circuit Breaker Panels

Distribution panels have 28 bullet-style positions that accept either TPS or TPL fuses up to 125A or circuit breakers up to 175A. Any fuse or circuit breaker may be installed in any position with no spacing requirements. Each panel includes its own alarm lights for power loss and fuse/breaker alarms. Hinged doors on each panel provide circuit breaker and fuse protection and prevent incorrect installation.

VIM 1 Intelligent Meter

The VIM1 smart meter monitors voltage and current of each load center with individually configured overload thresholds, power loss and fuse/breaker alarms. Form-C relays for each of the three alarms are accessed via terminal blocks located at the top of the cabinet. The VIM1 receives redundant power from Load A and B buses as well as an optional external Auxiliary Battery Supply (ABS) connection.

Benefits

Reliability

- Delivers decades of service
- High availability architecture
- NEBS level 3 certified

Intelligence

- Industry leading programmable digital smart monitor
- Visual, audible and remote alarms

Investment Protection

- Backward compatibility
- Flexible upgrade options

On Time Delivery

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

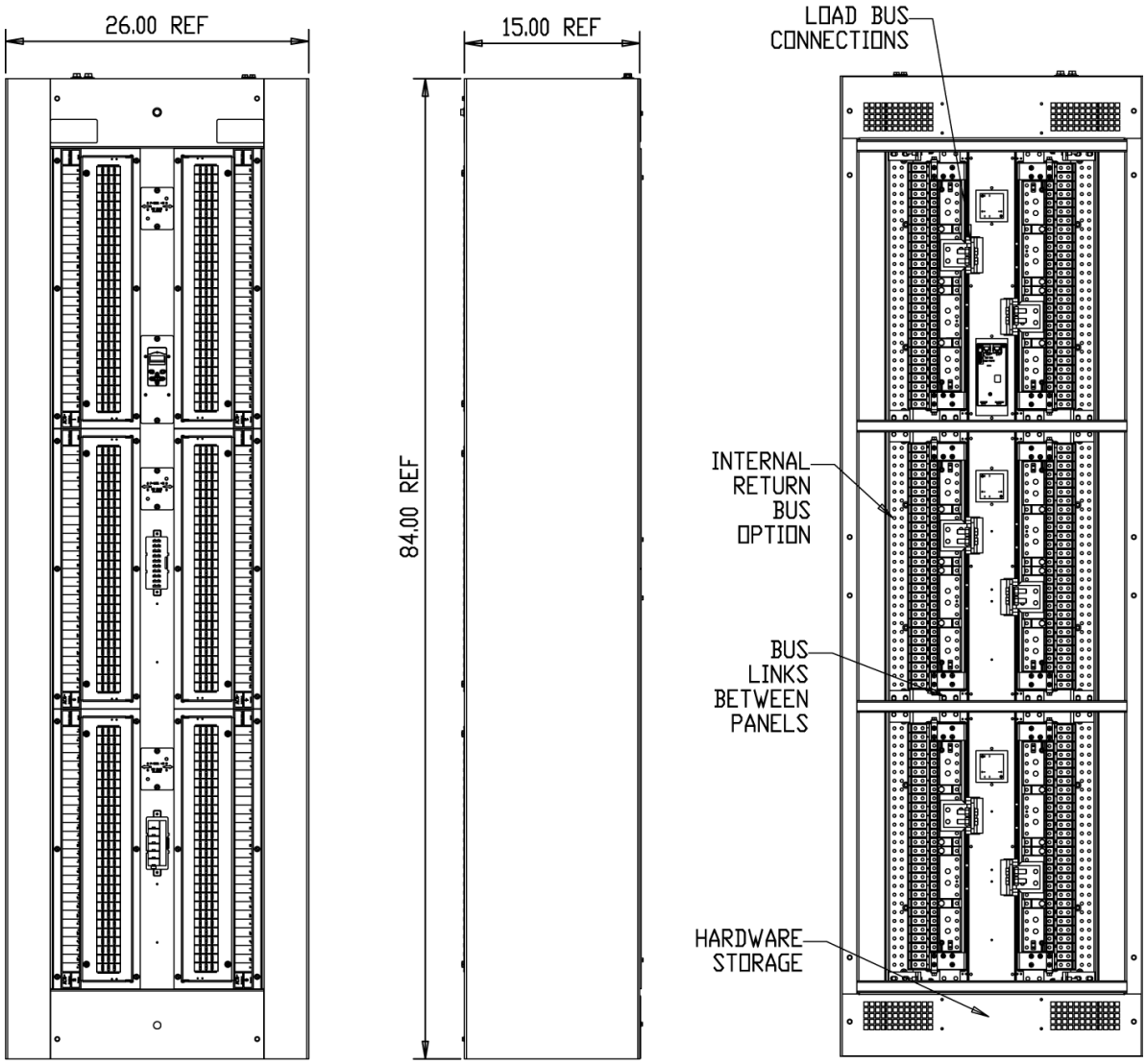
Total Efficiency

The GE Energy Total Efficiency™ (TE) architecture reduces energy loss and lowers cooling costs by 50-70%. TE products will prioritize sustainable energy sources like solar, wind, water and fuel cells over traditional utility grid or diesel generator sources – and they will intelligently respond to smart grid information to reduce consumption during peak demand periods. Active Rectifier Management (ARM) and Battery Charging Optimization (BCO) features increase efficiency on current and legacy power infrastructures. The Total Efficiency architecture addresses issues end-to-end based on our proven experience and expertise in batteries, power distribution, DC energy systems, AC-DC power supplies, and DC-DC board mounted power to deliver a solution that is more safe, reliable and energy efficient than alternatives from our competitors.

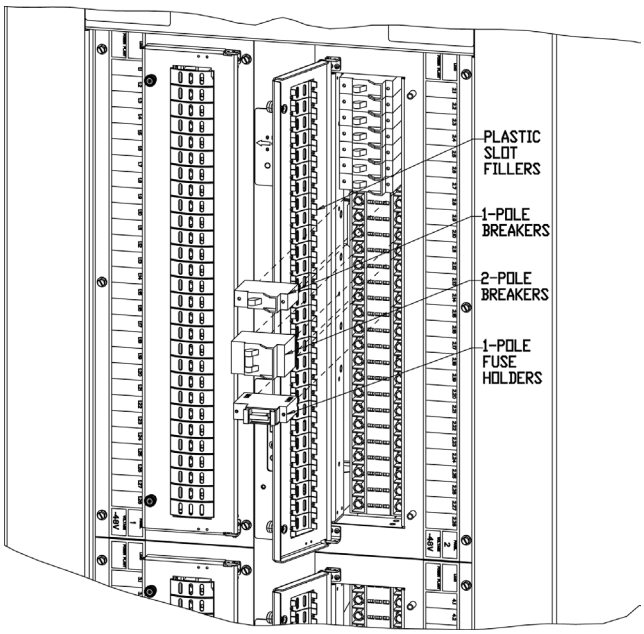
imagination at work

Cabinet Drawings

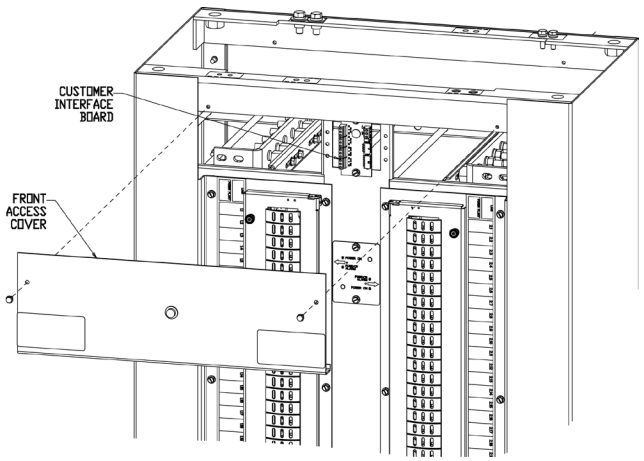
Outline Drawing of 7ft Cabinet



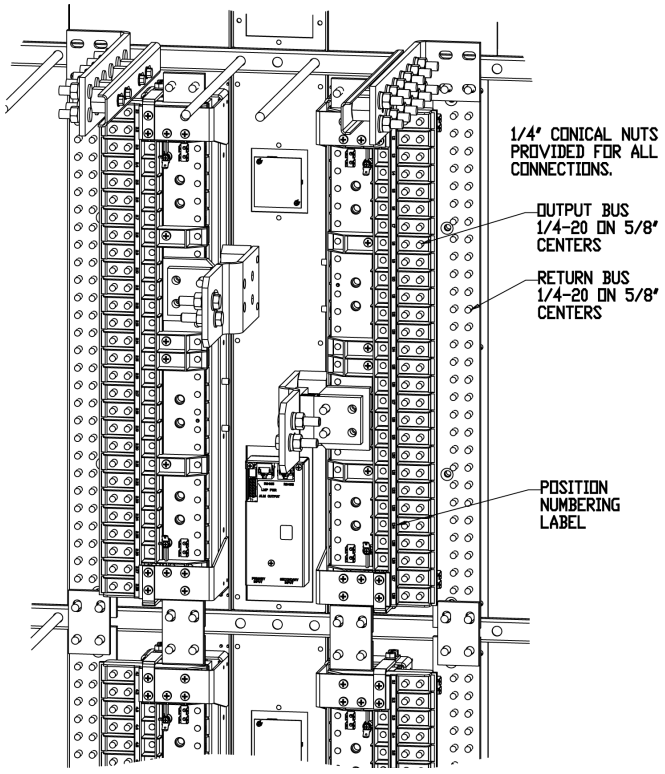
Miscellaneous BDFB Equipment Views



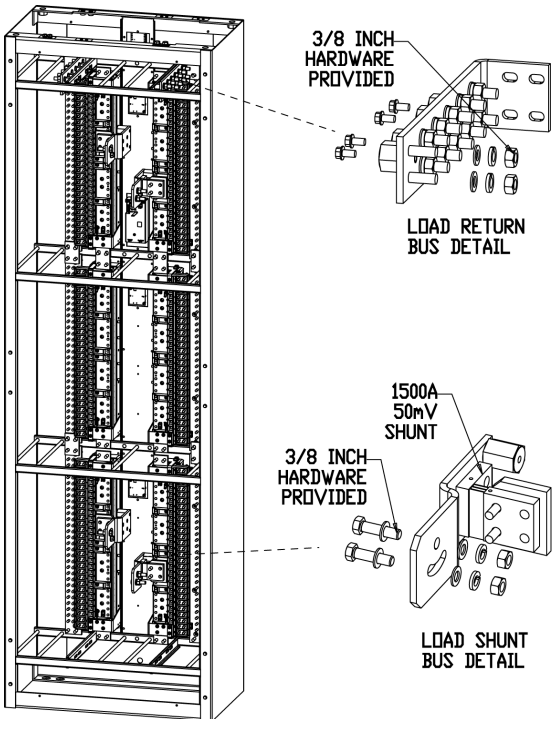
Fuse or Circuit Breaker Installation



Alarm Termination Board

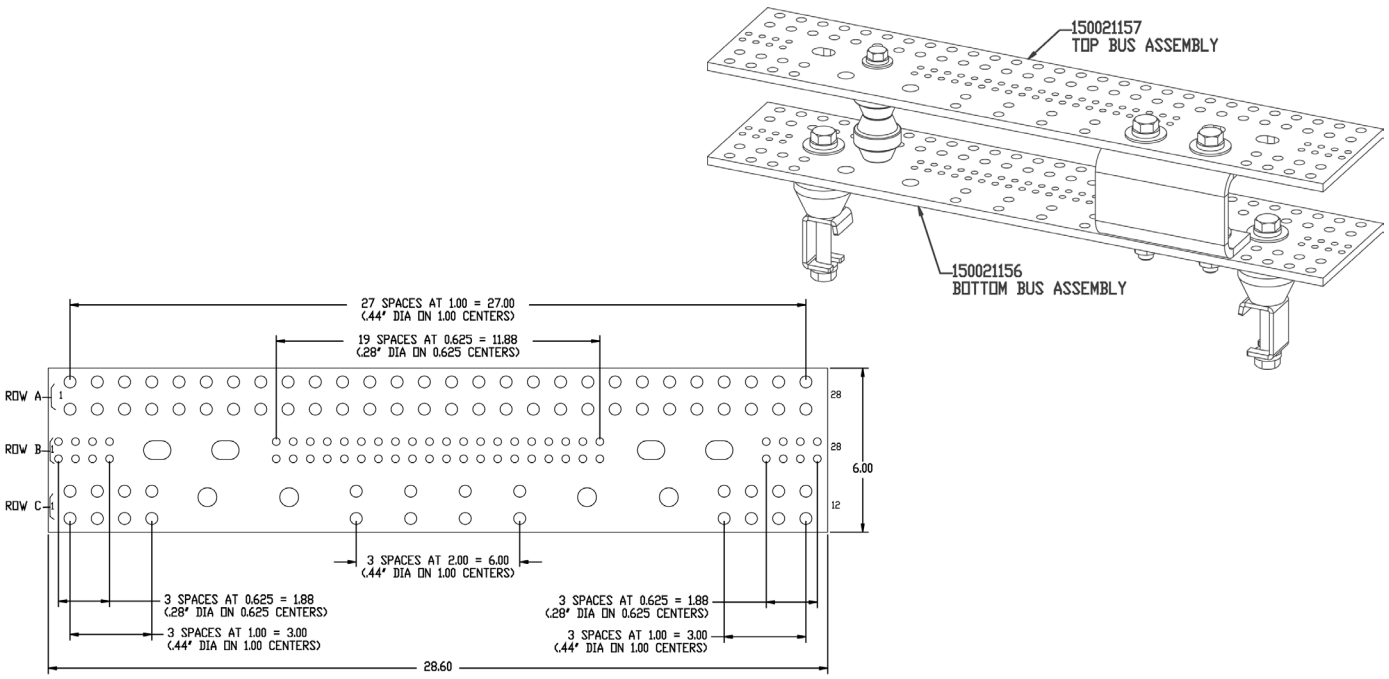


Distribution Panel Connections



Load Input Connections

External DC Return Bus Options



Specifications

Capacity	
Output Voltage	-48VDC
Output Current per Load	800A
Load Complement	2,4 or 6
Distribution	28-Position Panels for Bullet Style Protectors
Protectors	Bullet-Style Fuse Holders, TPS or TPL Fuses through 125A Single-Pole LEL Bullet-Style Circuit Breakers through 100A Two-Pole LEL Bullet-Style Circuit Breakers through 175A
Mechanical	
Width	26" / 660mm
Depth	15" / 381mm
Height	84" / 2134mm
Weight	375 lbs. (with 6 panels)
Color	Central Office Soft Blue
Cabinet Extension Height (inch/mm)	12" / 305mm 24" / 610mm 54" /1372mm
Environmental	
Operating Temperature Range	0°C to +40°C (32°F to 104°F)
Agency Certifications	
Telcordia	NEBS Level 3 Certified
Seismic Rating	Zone 4
UL	Canada/US UL60950/UL1801
CE	CE Mark
EMI/EMC	CISPR class A conducted and radiated

Step 1: Select Power Bays

Ordering Code	Cabinet Options (See Notes 1,2)
CC109168530	6 load, 6 panels, internal returns. (H569445 G7 G10A, G23-3, G33-3, G63, G63A-3, G272)
CC109168547	6 load, 6 panels, external returns. (H569445 G7 G10A, G23-3, G33-3, G60, G272)
150020729	2 load, 6 panels, internal returns. (H569445 G7 G10A, G23, G33-3, G63, G63A-3, G272)
150020730	2 load, 6 panels, external returns. (H569445 G7 G10A, G23, G33-3, G60, G272)
Ordering Code	**Extension Cabinet Options for top of BDFB**
CC109132040	1ft cabinet extension kit
848258570	2ft cabinet extension kit
848258588	4-1/2ft cabinet extension kit
Ordering Code	**External Return Bus Assembly Options**
150021156	One 2400A External DC Return bus for mounting on 15 or 20 inch cable rack (1st Tier)
150021157	One Supplementary 2400A DC Return bus for stacking on a 150021156 bus. (Order 1 for a 2 Tier arrangement. Order 2 for a 3 Tier arrangement)
Ordering Code	**Miscellaneous Spare/Replacement Parts**
850018546	Label Kit for numbering panel positions 1.1 to 1.28 through 6.1 to 6.28. (BDFB's ship with 1 label kit)
CC109172854	VIM1 Digital Meter Assembly
CC109172747	Alarm Termination Board
CC109172730	Panel LED Alarm Board
848429288	Top Cover Kit for Cabinet for Bottom Feed Applications
150021903	Two 28-Position Distribution Panels
150021902	Two Load Bus Shunt Assemblies (Mounts on two 28-position distribution panels)
847135662	(4) ½ inch drop-in anchors (For Zones 0,1,2)
847135688	(4) 12mm cap bolts anchors (For Zones 0,1,2,3,4)

Note 1: Load shunt connections are accessible for either top or bottom cable entry without field modification.
Note 2: Linking Buses are provided between all panels so a 6-load BDFB may be field modified for 2 or 4 loads.

Step 2: Select Distribution Components

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	
450023081	175	2	1/0	
850019325	2-Position Adapter Bus Kit (one required for 2-pole breakers and one for internal return bus)			

Step 2: Select Distribution Components (cont.)

Ordering Code	Amperage	Photo
TPS/TLS Fuses		
406700567	3	
406700583	5	
406700591	6	
406700609	10	
406700617	15	
406700625	20	
406700633	25	
406700641	30	
406700658	40	
406700674	50	
406700682	60	
406700690	70	
CC408618020	80	
CC408618037	90	
CC408618045	100	
CC408618061	125	
402328926	0.18 Alarm Fuse	
408548944	Bullet Fuse Holder, TFD-101-011-09 (Alarms on Blown Fuse or Fuse Head Removal)	
CC408617410	Bullet Fuse Holder, TFD-101-011-10 (Alarms on Blown Fuse Only)	

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 Energy 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 Energy 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 Energy 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.ge.com/powerelectronics.

Contact Us

For more information, call us toll free at **+1 888 546 3243**, or +1 972 244 9288 and visit us on the web at **www.ge.com/powerelectronics**

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