



48VIT80LAHR 1U Cabinet-Mounted Battery Reserve Module for Cabinet Applications



Overview

The 48VIT80LAHR 1U cabinet-mounted battery reserve module is an intelligent versatile electronic fully integrated reserve system that delivers energy storage to support load during AC power line disturbances and outages. The 48VIT80LAHR is the first of the 48VIT80LAHR family of batteries. Its technology is lead acid (LA) and is designed for High Rate (HR) discharge float applications. This module is designed for standard rack-mount applications and is feature rich when used with GE Critical Power systems and controllers.

The 48VIT80LAHR battery reserve module is utilized in standard Edge Power Cabinet applications in data centers and enterprise applications. Connectivity with the Galaxy Pulsar Edge controller facilitates a multitude of battery management functions and features.

48VIT80LAHR battery module is designed around reserve systems requiring rapid battery discharge rates that are typical in today's data center applications.

This battery module supports a rapid recharge that minimizes the time period between unprotected AC line outages.

48VIT80LAHR battery modules are designed to be light weight such that they can be safely handled by a single technician. These modules are enclosed entirely in a sturdy metal enclosure and are made to be plugged into and easily removed from the reserve system. The Output battery voltage is internally disconnected from the module's pluggable connector upon removing the module from the system. Thus, the servicing technician and other potential contact surfaces are not exposed to any hazardous energy contacts from the battery when it is not installed.

These battery modules are fully assembled, integrated, factory tested and are maintenance free. 48VIT80LAHR battery modules are constructed using high-discharge capable valve regulated lead acid batteries.

Advantages

- Edge Power Cabinet Applications
- UPS “like” Applications
- Enterprise Networks - Voice, Data, PoE
- Fiber in the Loop
- Routers/Switches Reserve Backup
- Transmission Equipment
- Data Networks
- PBX
- Telecommunications Networks

Key Features

Standard System Features

- Valve regulated design
- Designed for High Rate usage
- Utilizes absorbent glass mat technology
- Standard 19" rack-mount 1U module
- Pluggable – Easily installed or removed
- Designed for parallel application
- Usable in vertical or horizontal mount
- Keyed for polarity management
- Vented for front to back air flow and exhaust
- Maintenance free (No water topping-off)
- Non-spillable
- Front panel LED status indicators
- Configuration rotary switch for system identification
- Approved for air transport

Battery Management Features:

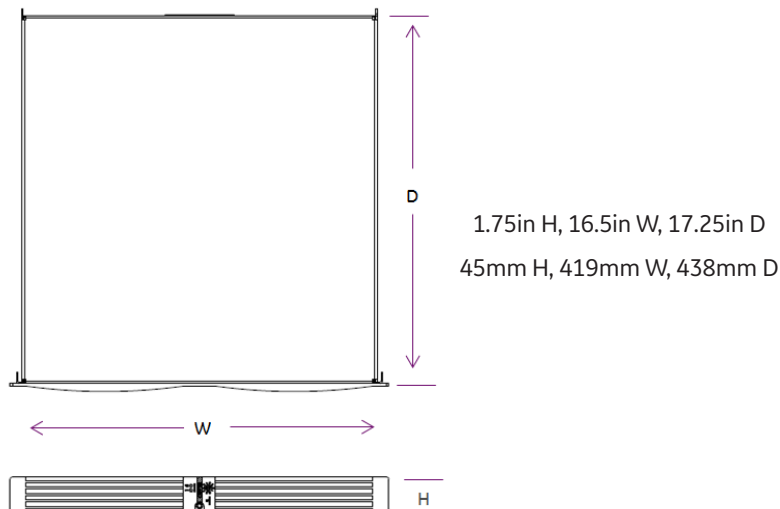
- Integrated Low Voltage Disconnect (LVD) with autonomous disconnect/reconnect
- Integrated overcurrent fuse protection

- Internal electronics provide temperature and partial string voltage measurements
- Emergency Power-Off input

Features With GE System Controller:

- Robust RS485 system communication bus compatible with GE controllers
- Automatic communication link-up with GE controllers
- Active recharge current limit (Float/Boost)
- Charge and Discharge current monitoring
- Internal module voltage monitoring
- Standard Inventory management including part number, serial number, series number, software versions, date of manufacture, and date of last charge
- Battery Low Voltage Disconnect (LVD)
 - User configurable battery disconnect/reconnect voltage set-points
 - Adaptive High Rate LVD feature
- Float/boost mode control
 - Manual boost
 - Manual timed boost locally and remotely
 - Auto boost terminated by time or current
- Battery discharge testing
 - Manual (local/remote)
 - Periodic
 - Configurable threshold or 20% algorithm
 - Graphical discharge data available
 - Rectifiers kept on-line during test for backup
 - State of charge indication
 - Reserve time prediction*
- Slope Thermal Compensation (STC)
 - High and Low temperature comp
 - Step temperature runaway backup
 - Separate Low STC Enable/Disable
 - Configurable mV/°C slope temp-comp rates
 - High temperature disconnect setting

PHYSICAL DIMENSIONS



PERFORMANCE SPECIFICATIONS	
Nominal Voltage	48 Volts (24 cells) Float/Standby: 54.5 Volts nom (54.0 to 55.2 Volts) Cyclic: 57.6 to 60.0 Volts (2.4A max, float <90mA)
Nominal Capacity	1-Min Rate (W, V): TBD Ah 5-Min Rate (1998W, 31.2V): 3.7 Ah 15-Min Rate (864W, 31.2V): 4.5 Ah 1-Hr Rate (5.80A, 35V): 5.8 Ah 10-Hr Rate (800mA, 42V): 8.0 Ah
Approximate Weight	35lbs (15.9 kg)
Max Discharge Current (5 Min)	45 A
Max Short duration Discharge Current (10 sec)	80.0 A
Internal Resistance (approx.)	60 mΩ*
Shelf Life (self-discharge)	<3% per month (25°C)
Operating Temperature Range	Charge: 32°F (0°C) to 104°F (40°C) Discharge: -4°F (-20°C) to 122°F (50°C)
Storage Temperature Range	-4°F (-20°C) to 104°F (40°C)
Operating Relative Humidity	0 - 95% (non-condensing)
Case Material	Acid-resistant, coated, steel jacket

Discharge Data: Constant Power Discharge Characteristics at 25°C (77°F) Watts

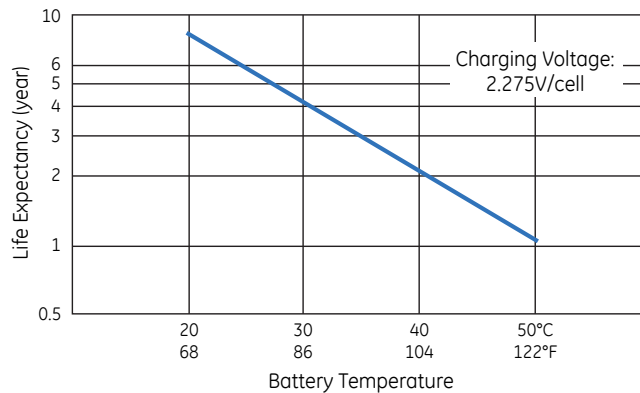
DISCHARGE TIME	20 SEC	30 SEC	40 SEC	50 SEC	60 (1MIN)	2 MIN	3 MIN	4 MIN
END MODULE VOLTAGE								
43.2 V								
40.8 V								
39.6 V	4902	4580	4346	4198	3810	3177	2620	2304
38.4 V								
36.0 V								
33.6 V								
31.2 V								

DISCHARGE TIME	5 MIN	10 MIN	15 MIN	20 MIN	30 MIN	40 MIN	50 MIN	60 MIN	120 MIN
END MODULE VOLTAGE									
43.2 V	1476	1008	730	623	473	360	300	264	146
40.8 V	1764	1125	794	660	493	373	310	271	148
39.6 V	1863	1167							
38.4 V	1890	1184	830	684	504	382	316	276	151
36.0 V	1944	1200	848	695	510	387	320	278	152
33.6 V	1980	1222	857	701	514	389	323	280	152
31.2 V	1998	1233	864	705	516	392	324	280	152

Discharge Data: Constant Power Discharge Characteristics at 25°C (77°F) Amps

DISCHARGE TIME	5 MIN	10 MIN	15 MIN	20 MIN	30 MIN	40 MIN	50 MIN	60 MIN	120 MIN
43.2 V	32.9	22.1	15.7	13.3	10.0	7.5	6.2	5.5	3.0
40.8 V	40.0	24.6	17.1	14.1	10.4	7.8	6.4	5.6	3.1
39.6 V								5.6	3.1
38.4 V	42.9	25.9	17.9	14.6	10.6	8.0	6.6	5.7	3.1
36.0 V	44.1	26.4	18.3	14.9	10.8	8.1	6.7	5.7	3.1
33.6 V	45.0	26.8	18.5	15.0	10.8	8.1	6.7	5.8	3.1
31.2 V	45.4	27.0	18.6	15.1	10.9	8.2	6.7	5.8	3.1

Effect of Temperature on Long Term Float Life



Certifications

TYPE	ID
Safety	CE UL 94-VO
EMC	FCC/EN55022 Class B, CISPR22 Level B
ESD	EN 61000-4-2 level 4
IEC	61056-1
JIS	C 8702-1
GB/T	19639.1

Note: Due to self-discharge, it is necessary that they be charged within 6 months of storage
Permanent loss of capacity may result if this procedure is not kept.

Ordering Information

ORDERING CODE	MODEL	DESCRIPTION
150045423	48VIT80LAHR	1U HR VRLA Battery Reserve Module

Reliability

-
-
-

Intelligence

-
-
-

Investment Protection

-
-
-

On Time Delivery

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

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.