

# NEW HGS Power System featuring the G-Series® Rectifier



Bulletin: 380D

The New HGS Power System, featuring G Series® Rectifiers, is available in Plant configurations up to 10,000A. Each Plant includes Charge Bays, Battery Termination Bays, Load Distribution Fuse Bays, and BDCBBs.



## General Features

- The HGS is rated at -48 VDC, 10,000 ADC.
- The cabinet for each bay is totally enclosed, front access, and 84" tall with a 24" x 24" footprint. The cabinet is freestanding and has a .075" x 2.75" slot on each corner for floor anchors. The top is designed with one 3/8-16 nut on each corner to accept a lifting eyebolt, supplied by the customer.
- The system is designed to be connected in-line. If an application renders this impractical, the system components can be located apart from each other and wired together.
- Rectifiers are ordered separately.
- The standard rear covers are made of steel; optional clear polycarbonate covers are available.



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## CHARGE BAYS

Each Charge Bay is rated -48 VDC, 1680A (1400A for 480 VAC, 3 phase, 3 wire applications). Each bay is designed to accept a maximum of 24 rectifiers. Each Charge Bay is equipped with a system bus bar structure consistent with the current rating needed for that bay. Each Charge Bay is equipped with a sub-system manager. The initial Charge Bay is also equipped with a plant manager. Other alarm options are also available.

Each Charge Bay is available with several different AC input configurations. Please contact the factory for details.

## HGS BATTERY DISTRIBUTION FUSE BAY (BDFB)

This bay contains the 10,000 A discharge shunt (in the ground leg).

- The BDFB is -48 VDC, 5000A maximum.
- 800A fuse holders are connected to a single common bus.
- Each fuse bay is self-contained within its cabinet, including ground returns.
- Bus bar links are provided with this bay to connect it to the Charge Bay.

## HGS LOAD DISTRIBUTION FUSE BAY (LDFB)

- -48 VDC, 5000A maximum.
- **Eight (8) 800A fuse holders connected to a single common bus.**
- Each fuse position can accept two 777 MCM wires (maximum).
- The return bar structure is designed for 2-hole lugs, fastened with 1/2-13 hardware on 1.75" centers, allowing a wire size up to 777 MCM to be connected to each position.
- 800A LVD contactors and 800A Branch ammeter shunts are available in this bay.
- Additional LDFBs in different load distribution configurations are available.

## G SERIES<sup>®</sup> RECTIFIERS



The G Series<sup>®</sup> Global Rectifiers used in the HGS Power System are designed to provide regulated DC power for use in global telecommunications DC power applications. The rectifiers are used to operate telecommunications equipment and to charge stationary batteries located at switch sites and at remote cellular, radio and PCS sites. Users include RBOCs, ILECs, CLECs, wireless providers, cell sites, mobile radio, ISPs, and co-location providers.

The G Series<sup>®</sup> Rectifier System is the most technically advanced product of its type in the Global Telecom Power Industry. A true plug-and-play device, it utilizes digital technology to communicate with the system via Local Area Control Network (LACN) using LonWorks<sup>®</sup> communications protocol.

Within the G Series power system, there is only one adjustment point for setting float, equalize, alarms, high DC voltage shutdown and current limit. The G Series auto-setup feature does the rest, making initial installation and setup a breeze. Even if the controller fails or the user makes an adjustment error, the system will automatically default to "fail safe" settings.

Each rectifier module front panel includes a green LED (Rectifier OK) and a red LED (Rectifier Fail). An optional front panel display features a digital volt/amp meter plus control pads. This panel accesses all functions of the rectifier and can be used to make or change settings and provides indication of an alarm in the rectifier.

**Extended Input Voltage Range:**

Rectifiers can withstand input voltage up to 375 VAC for up to 30 minutes without damage.

**Features:**

- Plug-and-play digital rectifier system with built-in auto-setup capability.
- Alarm and control functions configured via Local Area Control Network (LACN) using LonWorks® technology.
- User access to LACN via optional front panel display or via G Series controller.
- Individual rectifiers are identified by serial number and location.
- Remote DC plant monitoring using the SCUI (Simple Control User Interface) or other monitor/controllers with such features as RS232, R485, modem connections, or with PCP's G Series® Gateway monitor and control.



**RECTIFIER SPECIFICATIONS**

Input Voltage: 176 to 305 VAC; 45 to 65 Hz, Single Phase.

DC Output: -54 VDC, 70 Amps (-40°C to +50°C).

-54 VDC, 50 Amps (+51°C to +65°C).

Operating Temperature Range: -40°C to +65°C ambient.

Cooling: Fan-forced front to rear flow (multi-speed fan).

UL 1950 Recognition (File E186749); European Conformity CE Mark.

**MOUNTING SHELF SPECIFICATIONS**

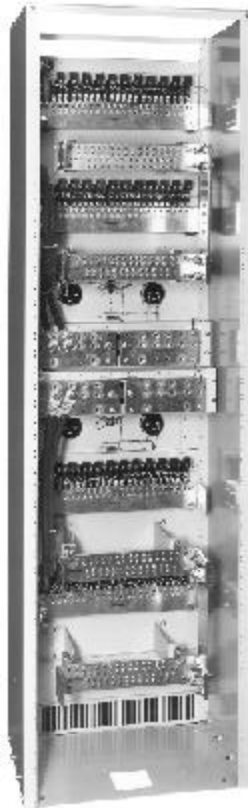
Four-Across: 23" (58 cm) W x 21" (53 cm) D x 10.5" (27 cm) H. Weight: 35 lbs.

UL 1950 Listing (File E186749); European Conformity CE Mark.

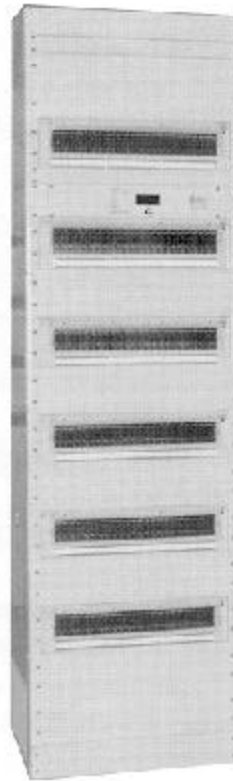
## BATTERY DISTRIBUTION CIRCUIT BREAKER BOARDS (BDCBBs)



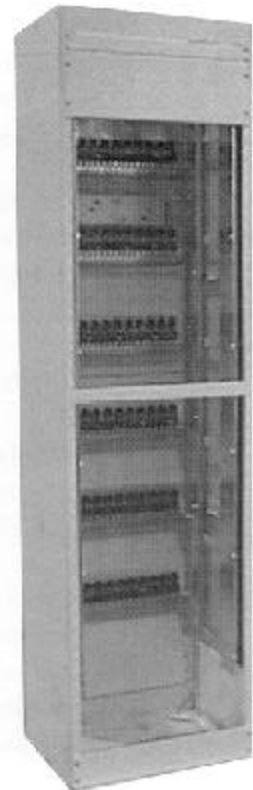
**Typical BDCBB**  
P/N 9697988042  
**FRONT VIEW**  
(7' H x 24" W x 18" D)



**REAR VIEW**  
(with covers removed)



**DIGITAL BDCBB**  
P/N 9648903103



**REAR VIEW**  
(with covers removed)

### STANDARD FEATURES

- 7' (2.13 m) or 7'6" (2.3 m) high x 24" (62 cm) wide x 12" (31 cm) or 18" (46 cm) deep steel rack with enclosed sides and clear Lexan® rear covers.
- 16-, 22-, or 24-Position Circuit Breaker Distribution Panels (1-70A, Airpax "LMK" series circuit breakers with alarm contacts).
- Tin-plated copper bus bars.
- 600A to 1200A ratings.
- Two-hole lug ground returns.
- Bottom or top cable entry.

### OPTIONAL FEATURES

- Separate "A" and "B" bus metering.
- Separate "A" and "B" bus low voltage disconnects.
- Isolation pad to isolate the enclosed rack frame from the floor (P/N 0000936228).
- Top cover (Lexan®).
- Digital Metering.