

# ***GALAXY Switchmode Rectifier***

## ***596B6***

***+24 Vdc, 137 Adc, 208/240 Vac***



The new GALAXY Switchmode Rectifier 596B6 provides highest quality dc power for telecommunications and data processing systems and their batteries.

Ideal for today's 24V wireless applications, the new 596B6 rectifier from Lineage Power provides the highest quality dc power for telecommunications. This 24V 137A rectifier builds upon the same reliability and quality as other 596 series rectifier while featuring an improved power density. The 596B6 rectifier provides 24V at 137A up to 40°C and operates up to 85°C.

Like the other 596 series rectifiers, the 596B6 integrates the latest switchmode technology with superior power, protection, and control features in a cost-efficient power-conversion system. It can be used in the GALAXY Power System (GPS) and Infinity FMS 24V Battery Plants. It converts ac input voltage into the dc voltage level required to power end-user equipment, as well as to float-charge batteries at precise voltage levels. The 596B6 will work in existing systems with Lineage Power 596B4 or 596B5 rectifiers.

### ***Benefits***

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#### ***Compact, power-packed***

For high power density, Lineage Power's revolutionary technology packs ever-greater power into ever-shrinking packages. The result is a rectifier that packs 7W/in<sup>3</sup>, weighs just 14 lb. (6 kg), requires minimal maintenance, and frees up valuable floor space.

#### ***Quick setup***

Installation is swift and straight-forward. Interconnections to ac-input, dc-output, and control signals are automatic during insertion. No adjustments or settings are required.

#### ***Economical operation***

The 596B6 exhibits an excellent 0.99 power factor and high efficiency, thereby minimizing ac usage and contributing to highly reliable, low-cost operation.

**Extended Service Life**

For greater reliability and robust operation, the 596B6 features parallel operation with digital load sharing, which evenly balances the load current among multiple rectifiers in the event one fails or is removed from the system.

**Fail-Safe Performance**

Hot-insertion capabilities allow for rectifier replacement without system shutdown; softstart circuits and inrush control prevent upstream breakers from tripping. To avoid load or rectifier damage, the 596B6 is equipped with overvoltage/overcurrent protection. A variable-speed fan maintains safe operation in -40 °C to 85 °C ambient temperatures.

The 596B6 operates with or without batteries.

**Simplified Control/Monitoring**

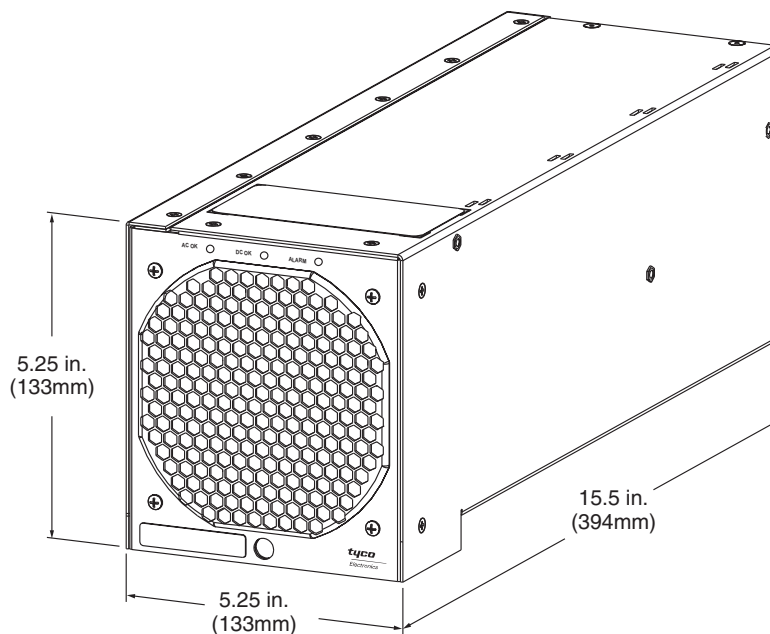
Three LEDs on the faceplate indicate normal, caution and alarm conditions. A microprocessor manages all internal alarm and state decisions, and, for more extensive monitoring and control capabilities, provides serial digital communication with the GALAXY family of controllers. Overall, the unit is easy to install with minimal labor, lowers typical operating and installation expense, and delivers the reliable high performance required by the most stringent telecommunication and data processing applications. The 596B6 is UL\* recognized.

*\* UL is a registered trademark of Underwriters Laboratories, Inc.*

**Features**

- Microprocessor controlled
- Digital load-sharing
- 2-wire interface
- Three LEDs for normal, caution and alarm conditions
- Hot pluggable
- Compact, modular construction
- 3700 W output (137A at 27.24V)
- UL Recognized

**Outline Drawing**



**GALAXY Switchmode Rectifier Model 596B6**

**Specifications**

<b>Electrical</b>	
<b>Input</b>	
Voltage, Nominal	208 Vac/240 Vac, single phase, 2-wire plus ground
Voltage Range, Steady State	176 Vac to 264 Vac
Frequency	47 Hz to 63 Hz
Current, Nominal	18.52 A at 208 Vac 15.9 A at 240 Vac
Power Factor	>0.99 at 50% to 100% load
Total Harmonic Distortion	3% at 100% load
<b>Output</b>	
Voltage Adjustment Range, Float/Boost	22 Vdc to 30 Vdc
Regulation (with GALAXY controller)	±0.5%
Ripple	100 mVrms
Noise	<2 mV psophometric
Output Current	-40°C to -13°C; 110 Adc max -13°C to +40°C; 137 Adc max +40°C to +50°C; 125 Adc max +50°C to +65°C; 110 Adc max +65°C to +85°C; 70 Adc max
Current-Limit Set Point	37.5 Adc to 137 Adc
<b>Mechanical</b>	
Width	5.25 in. (133 mm)
Height	5.25 in. (133 mm, 3RU)
Depth	15.5 in. (394 mm)
Weight	14 lb (6 kg)
<b>Environmental</b>	
Efficiency	>88% at 50 Adc to 137 Adc output current
Operating Temperature	-40°C to +85°C (-40°F to 149°F)
Operating Relative Humidity	5% to 90% (noncondensing)
Storage Temperature	-40°C to +65°C (-40°F to 149°F)
Storage Relative Humidity	5% to 90%
Audible Noise	<52 dBA 0°C to 30°C, <60 dBA 31°C to 50°C
EMC	EN 55022, CISPR22, Level B, conducted and radiated
<b>Control and Monitoring</b>	
Visual Indicators	AC OK (green), DCOK (green), ALARM (red)
Meter	None
ID Switch (two)	ID (hex)
Serial Interface Signaling:	
Controller to Rectifier	Remote sense, load share, voltage set points, current set points, selective HVSD set points, HVSD, ON/STBY, lamp test
Rectifier to Controller	Rectifier current, rectifier temperature, ID, serial number, manufacturing information, operating and alarm status

Note:

**STBY** -Standby

**HVSD** -High voltage shutdown

**Specifications (continued)**

<b>Safety/Standards Compliance</b>	
NEBS	Evaluated by independent test lab with NRTL status to Telcordia GR63 and GR1089 (including level 3 testing)
Safety	UL1950, EN60950, CSA234/950
Certification Marks	UL Recognized (Canada and U.S.)

**Ordering Information**

<b>Description</b>	<b>Comcode</b>
596B6 Switchmode Rectifier +24 Vdc, 137 Adc, 208/240 Vac	108982893

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