

RECTIFIER

R24-3000



KEY FEATURES

Rectifier, +24 VDC, 3000 W

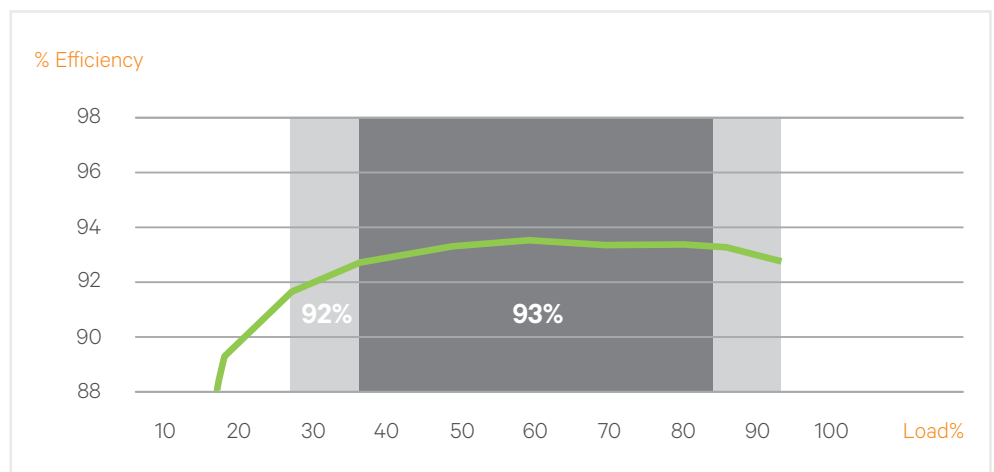
- High power density up to 9 kW in a 1U high 19" shelf, and 12 kW in a 1U high 23" shelf, means more space for revenue generating equipment
- Temperature controlled cooling fan reduces noise levels and increases fan longevity
- Full power 3000 W at +24 VDC output enables the start of deep discharged battery systems
- High efficiency up to 93% reduces power consumption for lower operating costs
- Hot swappable - makes rectifier removal and installation easy to facilitate upgrades and repairs without shutting down the system
- Wide input voltage range - maintains operation despite AC grid abnormal operating conditions
- Wide temperature operating range operates in the most demanding environments where the operating temperature ranges from -40°C to +80°C / -40°F to +176°F
- Zone 4 seismic delivers ruggedness and dependability in regions subject to earthquakes
- NEBS level 3 certified - meets the most demanding level of compliance required in the telecommunications industry
- Compliant with global standards delivers quality, performance and dependability

Description

The R24-3000 rectifier converts 90 to 275 VAC supply voltages of standard frequency into stable nominal +24 VDC voltage that is adjustable to the needs of the application. The R24-3000 is a constant power type rectifier designed with the latest patented switch mode technology using DSP (Digital Signal Processor) functionality for efficient operation. For a larger load capacity, the rectifier can be connected in parallel and intelligent controls can be added with the help of separate controllers.



R24-3000



R24-3000 Efficiency Curve at 240 VAC Nominal

Technical Specifications, R24-3000

AC INPUT	
Voltage	90 VAC to 275 VAC (see figure 1) 200 VAC to 250 VAC (nominal)
Frequency	45 Hz to 65 Hz
Maximum Current	18 A
Power Factor	>0.98 from 50 to 100% of capacity at nominal input
DC OUTPUT	
Voltage	21 VDC to 28.5 VDC
Maximum Power	3000 W @ Vout >24 VDC
Maximum Current	120 A @ +24 VDC, limit set point 10.5 to 125 A (see figure 2 for derating)
Peak Efficiency	93%
Psophometric Noise (System)	<1 mV
Temperature Derating	See figure 2 for derating
CONTROL AND MONITORING	
Rectifier Alarm and Signaling	Alarm and status reported via CAN bus to system controller
Visual Indications	Green LED: Power Yellow LED: Protection Red LED: Alarm Flashing Red LED: Fan Failure
ENVIRONMENTAL	
Operating	-40°C to +80°C / -40°F to +176°F (see figure 2 for derating)
Storage	-40°C to +85°C / -40°F to +185°F
Relative Humidity	0 to 95%
Altitude	-60 m to 3048 m / -200 ft to 10,000 ft
STANDARDS COMPLIANCE	
Safety	IEC 60950, EN 60950, UL 60950
EMC	EN 300386 class B, FCC part 15 class B, Telcordia GR-1089-CORE Class B
Environment	REACH, WEEE
MECHANICS	
Dimensions (H x W x D)	41.4 x 124 x 380 (mm) / 1.63 x 4.88 x 14.96 (inches)
Weight	2.9 kg / 6.4 lbs

Ordering Information

PRODUCT CODE	DESCRIPTION
1R243000XXX	Rectifier, +24 VDC, 3000 W, 125 A

Figures

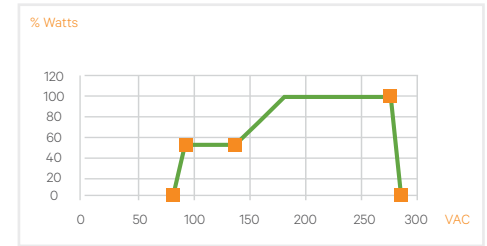


Figure 1
Output Power VS. Input Voltage
at $T_{amb} < 50^{\circ}\text{C}$

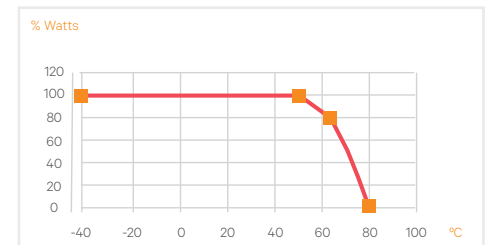


Figure 2
Output power vs. Temperature
at $275\text{Vac} \geq V_{in} \geq 180\text{ Vac}$