

RECTIFIER

R48-1000



KEY FEATURES

Rectifier, 48 VDC, 1000 W

- Low rectifier/subrack height minimize space needed for power in embedded applications
- Digital Signal Processing (DSP) means fewer components, optimized operation and active load sharing for increased reliability
- Compliant with global standards delivers quality, performance and reliability no matter what the application or location demands
- High efficiency, 92% efficiency reduces power consumption for lower operating costs
- Hot pluggable facilitates future extensions
- Wide input voltage range operates in the most demanding environments where input voltage changes
- Wide temperature operating range from -40°C to $+75^{\circ}\text{C}$ / -40°F to $+167^{\circ}\text{F}$ meets the harshest climatic environment requirements

Description

The R48-1000 rectifier converts standard AC supply voltages into stable nominal -48 VDC voltages adjustable to the needs of the application. The R48-1000 is a constant power rectifier designed with the latest patented switch-mode technology using Digital Signal Processing (DSP) functionality for efficient operation. For a larger load capacity, rectifiers can be connected in parallel and intelligent control can be added with the help of a separate controller.



R48-1000

Technical Specifications, R48-1000

AC INPUT	
Input Voltage, Nominal	200 VAC to 250 VAC (see figure 1) 85 VAC to 300 VAC (nominal)
Frequency	45 Hz to 65 Hz
Maximum Current	6.8 A
Power Factor	0.99

DC OUTPUT	
Voltage	-42 VDC to -58 VDC
Maximum Power	1000 W @ $V_{out} > 48$ VDC
Maximum Current	20.83 A @ -48 VDC and nominal input, limit set point 0 to 120 A (see figure 2 for derating)
Peak Efficiency	>92%
Psophometric Noise (System)	≤ 1 mV ; ≤ 32 dBnc

CONTROL AND MONITORING	
Rectifier Alarm and Signaling	Alarm and status reported via CAN bus to system controller
Visual Indications	Green LED: Normal Operation Yellow LED: Alarm Red LED: Failure Flashing Red LED: Fan Failure

ENVIRONMENTAL	
Operating	-40°C to +75°C / -40°F to +167°F
Storage	-40°C to +75°C / -40°F to +167°F
Relative Humidity	0 to 95%
Altitude	2000 m / 6560 ft at full power

STANDARDS COMPLIANCE	
Safety	IEC 60950, EN 60950, UL 60950
EMC	ETSI EN 300 386 class B, FCC CFR 47 Part 15 class B, Telcordia GR-1089-CORE class B
Environment	REACH, RoHS 5, WEEE

MECHANICS	
Dimensions (H x W x D)	40.8 x 86.5 x 241 (mm) / 1.6 x 3.4 x 9.5 (inches)
Weight	1.25 kg / 2.76 lbs

Ordering Information

PRODUCT CODE	DESCRIPTION
1R481000	Rectifier, 48 VDC, 1000 W

Figures

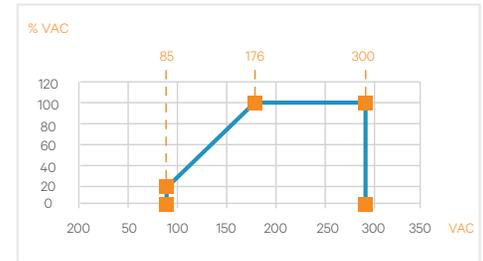


Figure 1:
Output Power vs. Input Voltage
at $T_{amb} < 45^{\circ}\text{C}$

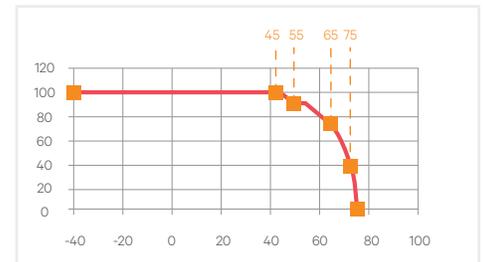


Figure 2
Output Power vs. Temperature
at $264 > V_{in} > 176\text{VAC}$