

Key Features

Rectifier, -48 VDC, 4000 W

- 4000 Watt high-efficiency rectifier designed for -48 VDC power applications
- Optimized depth – reduced footprint allows installation in short-depth racks and cabinets
- DSP (Digital Signal Processor) – 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, greater than 96%– reduces power consumption for lower operating costs
- Hot pluggable – facilitates future extensions
- Wide input voltage range to operate in the most demanding environments where input voltage changes
- Wide temperature operating range from -40°C to +75°C / -40°F to +167°F meets the harshest climatic environment requirements

In addition to reducing power consumption and lowering operating cost, eSure™ high-efficiency rectifiers offer superior performance and uncompromised reliability.

Description

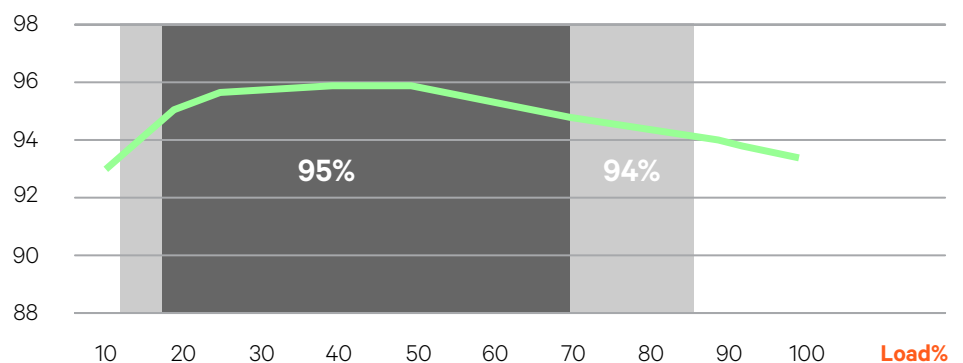
The eSure R48-4000e high-efficiency rectifier is designed to convert standard AC supply voltages into stable nominal 48 VDC voltage that is adjustable to application needs. The R48-4000e is a constant power rectifier designed with the latest patented switchmode technology, using DSP (Digital Signal Processor) functionality for efficient operation.

For a higher load capacity, rectifiers can be connected in parallel, and intelligent control can be added with the help of a separate controller.



R48-4000e

% Efficiency



R48-4000e Efficiency Curve at 230 VAC Nominal

Technical Specifications

AC Input	R48-4000E
Voltage	85 VAC to 305 VAC (see figure 1) 200 VAC to 277 VAC (nominal)
Frequency	45 Hz to 65 Hz
Maximum Current	24.7 A
Power Factor	0.99

DC Output	
Voltage	-42 VDC to -58 VDC
Maximum Power	4000 W @ Vout >48 VDC
Maximum Current	83 A @ -48 VDC, limit set point 8.3 A to 83 A (see figure 2)
Peak Efficiency	95.8%
Psophometric Noise (System)	<2 mV ; <32 dBrc

Control and Monitoring	
Alarms and Signaling	Alarm and status reported via CAN bus to system controller
Visual Indications	Green LED: Power On Yellow LED: Protection Red LED: Alarm Flashing Red LED: Fan Failure

Environmental	
Operating Temperature	-40°C to +75°C / -40°F to +167°F (see figure 3)
Storage Temperature	-40°C to +70°C / -40°F to +158°F
Relative Humidity	0 to 95%
Altitude	2000 m / 6560 ft at full power

Standards Compliance	
Safety	EN 60950-1, IEC 60950, UL 60950
EMC	ETSI EN300 386: 2005, FCC CFR 47 Part 15, Telcordia GR-1089-CORE issue 6 (Class B conducted and radiated)
Environment	REACH, RoHS, WEEE

Mechanics	
Dimensions (H x W x D)	132 x 85.3 x 287 mm / 5.2 x 3.36 x 11.3 inches
Weight	3.5 kg / 7.7 lbs

Ordering information

Part Number	Description
1R484000E	eSure™ rectifier, 48 VDC, 4000 W

Figures

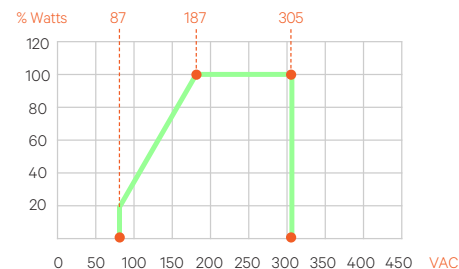


Figure 1: Output Power vs. Input Voltage and Vo > 48 VDC at Temperature < 45°C

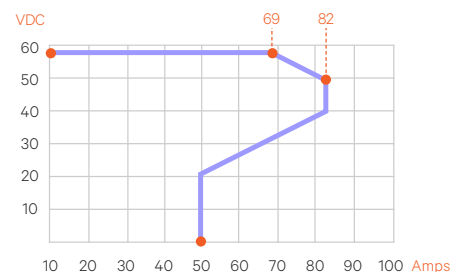


Figure 2: Output Voltage vs. Output Current at Maximum Output Power 4000 W

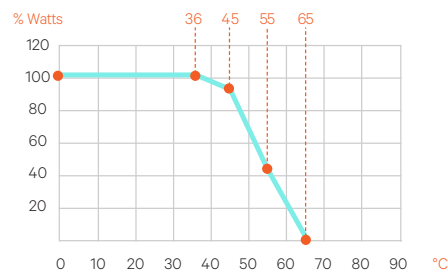


Figure 3: Output Power vs. Temperature at 305 ≥ Vin ≥ 176 VAC