

Key Features

- High efficiency above 95% reduces power consumption for lower operating costs
- Full power output up to +45°C and continued operation up to +75°C lowers operating cost
- High power density (45 W/in³) – reduced footprint allows installation in short-depth racks and cabinets
- Wide input voltage range to operate in the most demanding environments
- Hot pluggable – facilitates future expansions and easy maintenance
- Compliant with global standards – delivers quality, performance and reliability no matter what the application or location demands

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

Description

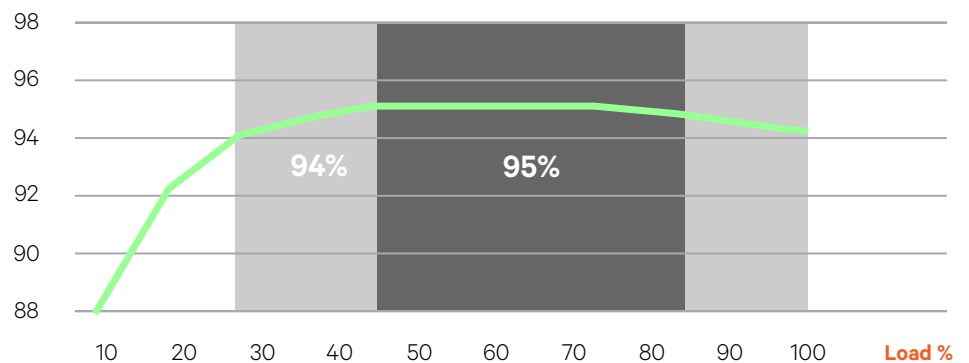
The 1000W high-efficiency eSure™ rectifier (model R48-1000e3) is designed to convert standard AC supply voltages into stable nominal -48 V DC voltage that is adjustable to application needs. The R48-1000e3 is a constant power rectifier designed with the latest patented switchmode technology, using DSP (Digital Signaling Processor) functionality for efficient operation.

This 1000W high density rectifier is ideal for outdoor enclosures and small cell applications where space is at a premium. At 45 W/in³ and only 152 mm (6 inches) deep, the R48-1000e3 fits into tight spaces where other rectifiers cannot.

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



% Efficiency



R48-1000e3 Efficiency Curve at 230 VAC Nominal

Technical Specifications

AC Input		R48-1000E3
Voltage	85 VAC to 300 VAC (see figure 1) 120 VAC, 200 VAC to 250 VAC (nominal)	
Frequency	45 Hz to 65 Hz	
Maximum Current	6 A	
Power Factor	>0.99 for 75% to 100% load	
DC Output		
Voltage	-42 VDC to -58 VDC	
Maximum Power	1000 W (see figure 2)	
Maximum Current	20.83 A @ -48 VDC, limit set point 0 to 20.83 A (see figure 2)	
Peak Efficiency	95.4%	
Control and Monitoring		
Alarms and Signaling	Alarm and status reported via CAN bus to system controller	
Visual Indications	Green LED:	Normal Operation
	Yellow LED:	Alarm
	Red LED:	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	EN55022, CISPR22, 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)	41 x 52 x 152 mm / 1.61 x 2.05 x 5.98 inches	
Weight	0.6 kg / 1.32 lbs	

Figures

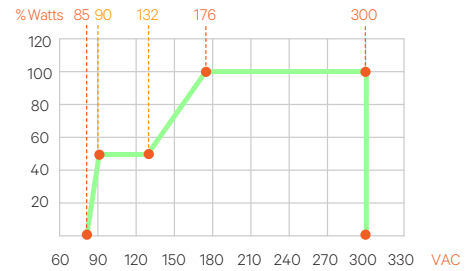


Figure 1: Output Power vs. Input Voltage at $T_{amb} < 45^{\circ}C$

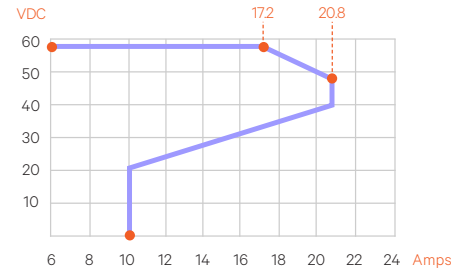


Figure 2: Output Voltage vs. Output Current at Maximum Output Power 1000 W

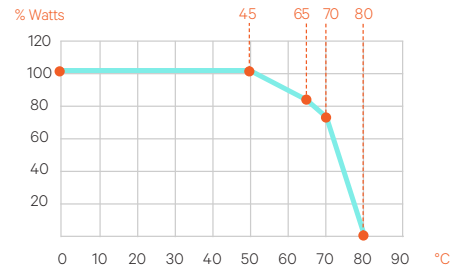


Figure 3: Output Power vs. Temperature at $264 VAC \geq V_{in} \geq 176 VAC$

Ordering Information

Part Number	Description
1R481000E3	eSure™ rectifier, -48 VDC, 1000 W