

# ESURE™ RECTIFIER

R48-2000e



## KEY FEATURES

### Rectifier, 48 VDC, 2000 W

- 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, 96.5%-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 +80°C / -40 °F to +176°F meets the harshest climatic environment requirements

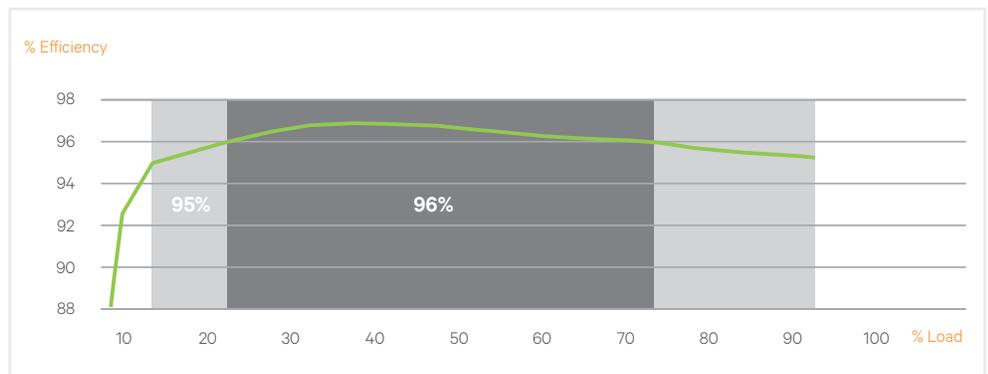
## Description

The eSure R48-2000e rectifier converts standard AC supply voltages into stable nominal -48V DC voltage adjustable to the needs of the application. The R48-2000e is a constant power rectifier designed with the latest patented switch-mode 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.



R48-2000e



R48-2000e Efficiency Curve at 220 VAC Nominal

## Technical Specifications, R48-2000e

AC INPUT	
Voltage	85 VAC to 300 VAC (see figure 1) 200 VAC to 250 VAC (nominal)
Frequency	45 Hz to 65 Hz
Maximum Current	13 A
Power Factor	0.99

DC OUTPUT	
Voltage	-42 VDC to -58 VDC
Maximum Power	2000 W @ $V_{out} > 48$ VDC
Maximum Current	41.7 A @ -48 VDC, limit set point 0 to 42 A (see figure 2 for derating)
Peak Efficiency	96.5% peak
Psophometric Noise (System)	<2 mV typical ; <38 dBnc typical
Temperature Derating	See Diagram (see figure 3)

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 +80°C / -40°F to +176°F
Storage	-40°C to +80°C / -40°F to +176°F
Relative Humidity	0 to 95%
Altitude	2000 m / 6560 ft at full power

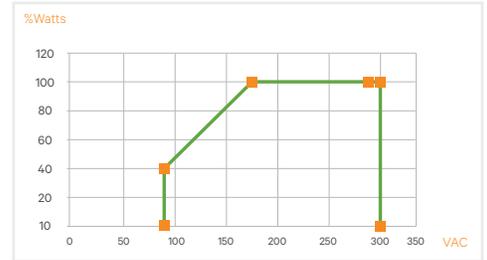
STANDARDS COMPLIANCE	
Safety	60950-1 (EN, IEC and UL)
EMC	ETSI EN 300 386 class B, FCC CFR 47 Part 15 class B, Telcordia GR-1089-CORE class B
Environment	REACH, RoHS, WEEE

MECHANICS	
Dimensions (H x W x D)	86 x 84.5 x 272 (mm) / 3.39 x 3.33 x 10.71 (inches)
Weight	2.4 kg / 5.3 lbs

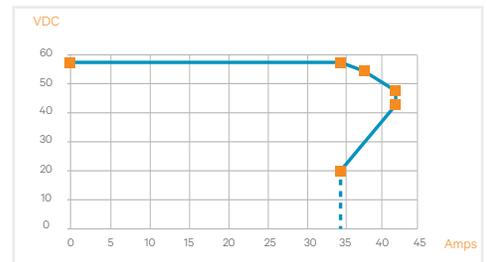
## Ordering Information

PRODUCT CODE	DESCRIPTION
1R482000EXXX	High efficiency eSure rectifier, 48 VDC, 2000 W

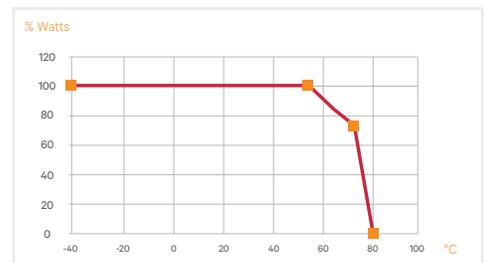
## Figures



**Figure 1**  
R48-2000e Output power vs. Input voltage and  $V_o > 48$ V at  $Temp = 55^\circ C$



**Figure 2**  
R48-2000e Output voltage vs. Output current at max. Power



**Figure 3**  
R48-2000e Output Power vs. Temperature at  $290V \geq V_{in} \geq 176$  Vac