

## KEY FEATURES

### Rectifier, -48 VDC, 3500 W

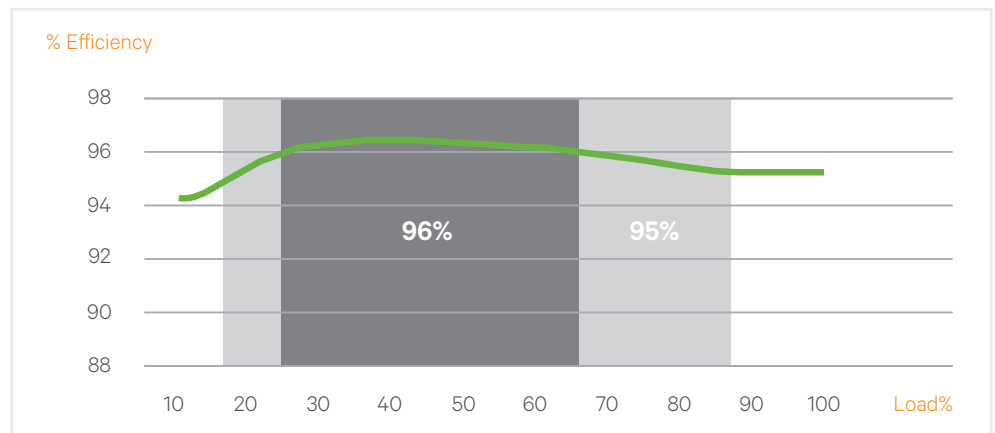
- 3500 Watt high-efficiency rectifier designed for -48V DC power applications
- Optimized depth – reduced footprint allows installation in short-depth racks and cabinets
- DSP (Digital Signal Processor)
  - means fewer components, optimized operation and active load sharing for increased reliability
- Compliant with global standards – delivers quality, performance and reliability no matter what the application or location demands
- High efficiency, approaching 97%
  - 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 R48-3500e high-efficiency rectifier is designed to convert standard AC supply voltages into stable nominal 48 VDC voltage that is adjustable to application needs. The R48-3500e 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.



R48-3500e Efficiency Curve at 230 VAC Nominal

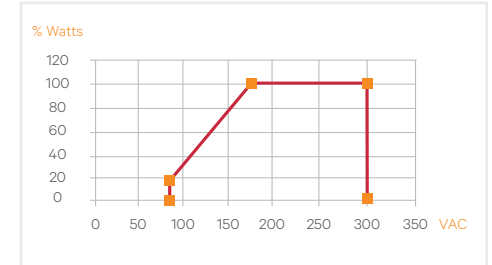
## Technical Specifications

AC INPUT	
Voltage	85 VAC to 305 VAC (see figure 1) 200 VAC to 277 VAC (nominal)
Frequency	45 Hz to 65 Hz
Maximum Current	22.5 A
Power Factor	0.99
DC OUTPUT	
Voltage	-42 VDC to -58 VDC
Maximum Power	3500 W @ $V_{out} > 48$ VDC
Maximum Current	73 A @ -48 VDC, limit set point 7.3A to 73 A (see figure 2 for derating)
Peak Efficiency	96.3%
Psophometric Noise (System)	<2 mV ; <32 dBrc
Temperature Derating	See figure 3
CONTROL AND MONITORING	
Rectifier Alarm 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	-40°C to +75°C / -40°F to +167°F
Storage	-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	60950 (EN, IEC and UL)
EMC	ETSI EN300 386: 2005, FCC CFR 47 Part 15, Telcordia GR-1089-CORE issue 6 (Class B conducted and radiated)
Environment	REACH, R5, 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

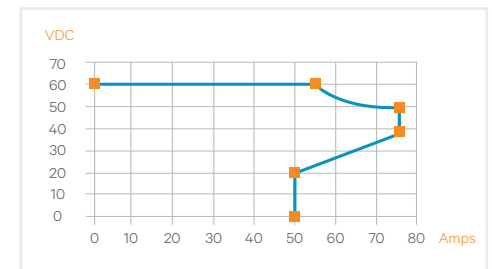
## Ordering information

PRODUCT CODE	DESCRIPTION
1R483500E	eSure rectifier, 48 VDC, 3500 W

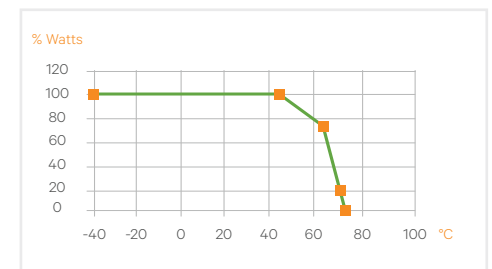
## Figures



**Figure 1:**  
Output Power vs. Input Voltage  
and  $V_o > 48$  V at Temp <45°C



**Figure 2:**  
Output Voltage vs. Output Current  
at Maximum Output Power 3500 W



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