

## Benefits

- Lower operating cost with high-efficiency eSure™ rectifiers, 96.3%
- Save on climate system dimensioning with 3.5 kW of full output power up to +45°C
- Operate your DC plant in the most demanding environments with wide input voltage range
- Easily expand capacity or perform maintenance during live system operation with hot-pluggable modules
- Rest assured with proven reliability that meets global safety standards 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.*

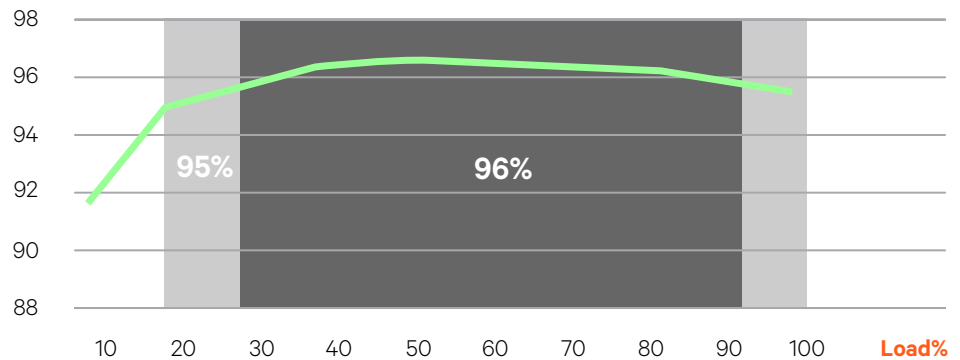
## Description

The 3500W high-efficiency eSure™ rectifier (model R48-3500e3) is designed to convert standard AC supply voltages into stable nominal -48 V DC voltage that is adjustable to application needs. The R48-3500e3 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.



## % Efficiency



R48-3500e3 Efficiency Curve at 230 VAC Nominal

## Technical Specifications

<b>AC Input</b>	
<b>R48-3500E3</b>	
Voltage	85 to 305 VAC (see figure 1) 200 to 277 VAC (nominal)
Frequency	45 Hz to 65 Hz
Maximum Current	22 A
Power Factor	>0.99 for 50%-100% load

<b>DC Output</b>	
Voltage	-42 VDC to -58 VDC
Maximum Power	3500 W
Maximum Current	73 A @-48 VDC limit set point 0 to 73 A (see figure 2)
Peak Efficiency	96.3 %
Temperature Derating	Full output power up to +45°C at input voltage range of 176-305 VAC when Vout ≥48V

<b>Control and Monitoring</b>	
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

<b>Environmental</b>	
Operating Temperature	-40 to 75°C, -40 to +167°F (see figure 3)
Storage Temperature	-40 to +70°C, -40 to +167°F
Relative Humidity	0 to 95%
Altitude	4000 m; above 2000 m (6562 feet) de-rate operating ambient temperature range by 3°C per 305 m (1000 feet).

<b>Standards Compliance</b>	
Safety	EN 60950-1, IEC 60950, UL 60950, BSMI, CE
EMC	ETSI EN300 386: 2005, Class B. EN55022, Class B
Environment	REACH, RoHS, WEEE

<b>Mechanics</b>	
Dimensions (H x W x D)	41 x 84.5 x 330 mm / 1.6 x 3.3 x 13.0 inches
Weight	1.7 kg / 3.75 lbs

## Ordering Information

Part Number	Description
1R483500e3	High efficiency eSure™ rectifier , -48VDC, 3500W

## Figures

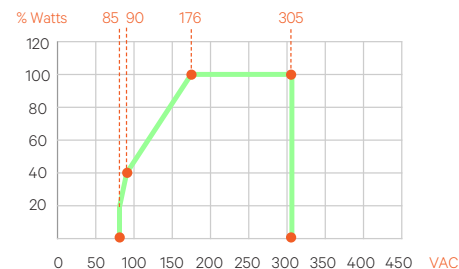


Figure 1: Output Power vs. Input Voltage at Tamb 45°C

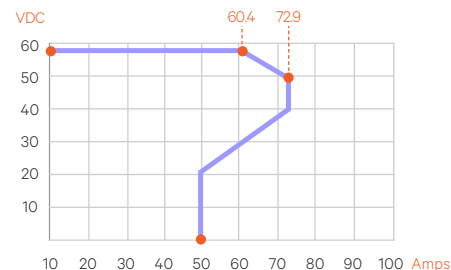


Figure 2: Output Voltage vs. Output Current at Maximum Output Power 3500 W

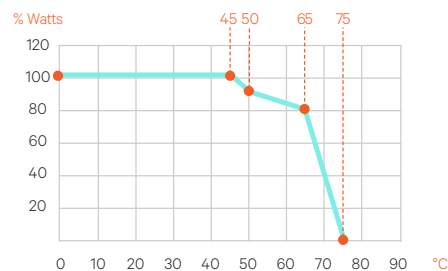


Figure 3: Output Power vs. Temperature at Uin ≥ 176 VAC