

KEY FEATURES

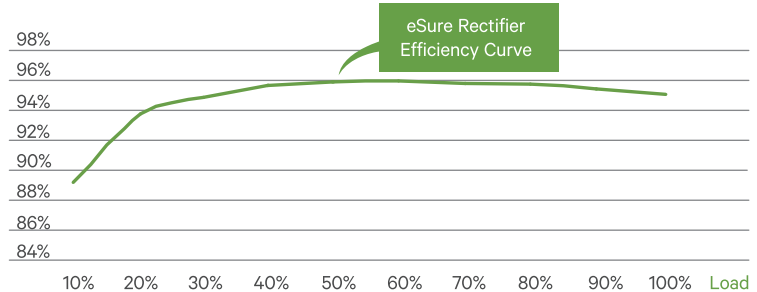
- High efficiency, reduces power consumption for lower operating costs
- Full output power (3KW) up to +50°C allows savings on climate system and operating costs
- Wide input voltage range to operate in the most demanding environments
- Hot pluggable – facilitates future expansions and easy maintenance
- 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 3000W high-efficiency eSure™ rectifier (model R48-3000e3) is designed to convert standard AC supply voltages into stable nominal -48V DC voltage that is adjustable to application needs. The R48-3000e3 is a constant power rectifier designed with the latest patented switchmode technology, using DSP (Digital Signaling Processor) functionality for efficiency 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.



Technical Specifications

AC INPUT	
Input Voltage, Nominal	200 to 250 VAC
Input Voltage, Permitted Variation	85 to 300 VAC
Line Frequency	45 Hz to 65 Hz
Max Input Current	19A@176VAC
Power Factor	>0.99 for 50%-100% load
THD (Total Harmonic Distortion)	≤5% for 50%-100% load at 208Vac,220Vac

DC OUTPUT	
Output Voltage, Adjustment Range	-42 VDC to -58 VDC
Output Power	3000W Maximum
Output Power, Derated for Input Voltage	See diagram
Output Current	62.5A@-48VDC
Output Current Limit Set Point	0 to 62.5 A
Peak Efficiency	96%@290VAC input and 53.5V/34A output
Temperature Derating	Full output power up to +50°C at input voltage range : 176-264VAC

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

ENVIRONMENTAL	
Temperature Range, Operating	-40 to 70°C, -40 to +158°F (See diagram for de-rating)
Temperature Range, Storage	-40°C to +70°C / -40°F to +158°F
Relative Humidity	0 to 95%
Altitude	2000 m / 6560 ft at full power
EMC	ETSI EN300 386: 2005, Class A. EN55022, Class A
Safety	EN 60950-1; IEC 60950

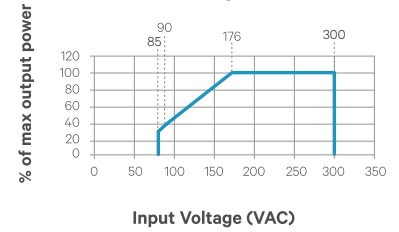
MECHANICS	
Dimensions (H x W x D)	41x 84.5x330mm/1.61x3.33x13 inches
Weight	2kg/4.41lbs

OTHER PART	
Controller Units	See separate controller datasheet

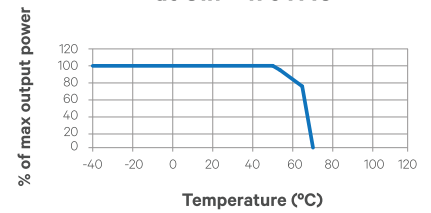
Ordering Information

PART NUMBER	DESCRIPTION
1R483000e3	High efficiency eSure™ rectifier, -48VDC, 3000W

Output Power vs. Input Voltage at Temp ≤ 50°C



Output Power vs. Temperature at Uin ≥ 176VAC



Output voltage vs. Output current, max. output power 3000 W

