

# eSure™ Rectifier

## R48-2000e3

### Key Features

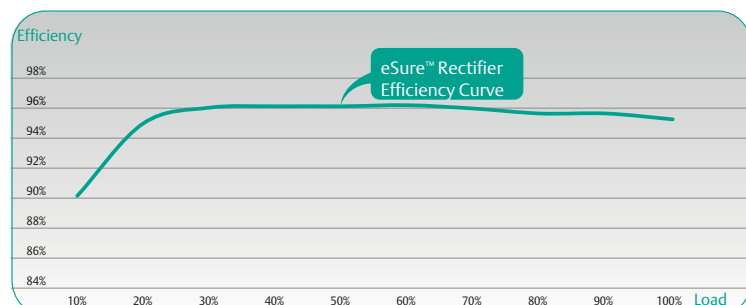
- High efficiency, above 96% – reduces power consumption for lower operating costs
- Full output power (2kW) up to +65 °C allows savings on climate system and operating costs
- High power density – reduced footprint allows installation in short-depth racks and cabinets
- Wide input voltage range to operate 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 2000W high-efficiency eSure™ rectifier ( model R48-2000e3) is designed to convert standard AC supply voltages into stable nominal -48 V DC voltage that is adjustable to application needs. The R48-2000e3 is a constant power rectifier designed with the latest patented switchmode technology, using DSP (Digital Signaling 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.



## Technical Specifications

AC Input	
Input Voltage, Nominal	200 to 250 VAC
Input Voltage, Permitted Variation	85 to 300 VAC
Line Frequency	45 to 65 Hz
Max Input Current	12 A
Power Factor	>0.99 for 50%-100% load
THD (Total Harmonic Distortion)	≤5% for 50%-100% load at 208Vac, 220Vac, 230Vac, 240Vac

DC Output	
Output Voltage, Adjustment Range	-42 to -58 V DC
Output Power	2000W Maximum
Output Power, Derated for Input Voltage	See diagram
Output Current	42A@-48VDC
Output Current Limit Set Point	0 to 42 A
Peak Efficiency	96.2%
Temperature Derating	Full output power up to +65°C at input voltage range >200 - 300VAC ( >176 - 200VAC, +55°C)

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 80°C, -40 to +176°F (See diagram for de-rating)
Temperature Range, Storage	-40 to +70°C, -40 to +158°F
Relative Humidity	0 to 95%
Altitude	2000 m, 6560 ft at full power
EMC	ETSI EN300 386: 2005, Class B. Other than telecom centers. FCC CFR 47 Part 15, Class B conducted and radiated EN55022, Class B conducted and radiated CISPR22, Class B conducted and radiated Telcordia GR-1089-CORE issue 6
Safety	UL 60950-1; EN 60950-1; IEC 60950

Mechanics	
Dimensions (H x W x D)	41x84.5x252.5mm/1.61x3.33x9.94 inches
Weight	1.13kg/2.49lbs

Other Parts	
Controller Units	See separate controller datasheet

## Ordering Information

Part Number	Description
1R482000e3	High efficiency eSure™ rectifier, -48VDC, 2000W

[EmersonNetworkPower.com/EnergySystems](http://EmersonNetworkPower.com/EnergySystems) (North America)

[EmersonNetworkPower.eu/EnergySystems](http://EmersonNetworkPower.eu/EnergySystems) (EMEA)

© Emerson Network Power Energy Systems North America 2013.

Business-Critical Continuity™, Emerson Network Power™, the Emerson Network Power logo, Emerson® and Consider it Solved are service marks and trademarks of Emerson Electric Co. EnergyMaster™, eSure™, NetPerform™, NetReach™, NetSpan™, NetSure® and NetXtend™ are trademarks of Emerson Network Power Energy Systems North America.

## Diagrams

