



eSURE™ RECTIFIER

R48-1000e3



Key Features

- High efficiency above 95% reduces power consumption for lower operating costs
- Full power output up to +45°C and continued operation up to +75°C lowers operating cost
- High power density (45 W/in³) –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 1000W high-efficiency eSure™ rectifier (model R48-1000e3) is designed to convert standard AC supply voltages into stable nominal -48 V DC voltage that is adjustable to application needs. The R48-1000e3 is a constant power rectifier designed with the latest

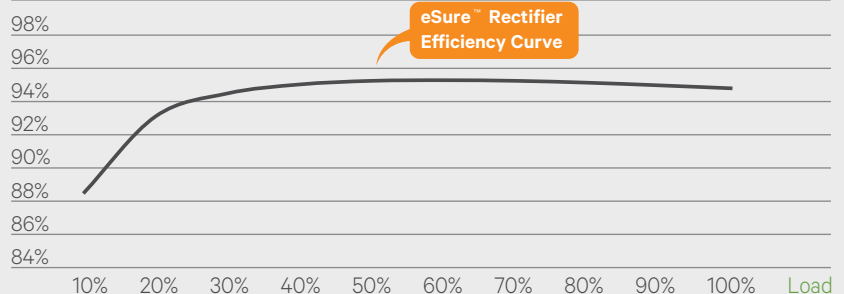
This 1000W high density rectifier is ideal for outdoor enclosures and small cell applications where space is at a

premium. At 45 W/in³ and only 152 mm (6 inches) deep, the R48-1000e3 fits into tight spaces where other rectifiers cannot.

For higher load capacities rectifiers can be connected in parallel, and intelligent control can be added with the help of a separate controller.



Efficiency



Technical Specifications

AC Input	
Input Voltage, Nominal	120 VAC, 200 to 250 VAC
Input Voltage, Permitted Variation	85 to 300 V AC
Line Frequency	45 to 65 Hz
Max Input Current	6 A
Power Factor	>0.99 for 75% to 100% load
THD (Total Harmonic Distortion)	≤5% for 50% to 100% load at 208 VAC, 220 VAC, 230 VAC, 240 VAC

DC Output	
Output Voltage, Adjustment Range	-42 to -58V DC
Output Power	1000W Maximum
Output Power, Derated for Input Voltage	See diagram
Output Current	20.83 A@-48 VDC
Output Current Limit Set Point	0 to 20.83 A
Peak Efficiency	95.4%

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 +75°C, -40 to +167°F (See diagram for derating)
Temperature Range, Storage	-40 to +70°C, -40 to +158°F
Relative Humidity	0 to 95%
Altitude	2000 m, 6560 ft at full power ETSI EN300 386: 2005, Class B. Other than telecom centers. FCC CFR 47 Part 15, Class B conducted and radiated
EMC	EN55022, Class B conducted and radiated CISPR22, Class B conducted and radiated Telcordia GR-1089-CORE issue 6
ROHS 6, REACH, WEEE	Compliance
Safety	UL 60950-1; EN60950-1; IEC60950

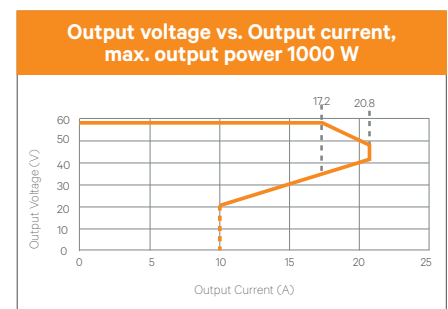
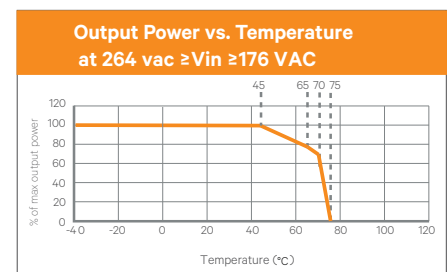
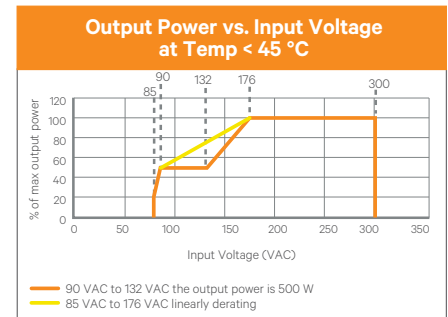
Mechanics	
Dimensions (H x W x D)	41 x 52 x 152mm / 1.61 x 2.05 x 5.98 inches
Weight	0.6kg / 1.32 lbs

Other Parts	
Controller Units	See separate controller datasheet

Ordering Information

Part Number	Description
1R481000e3	High efficiency eSure™ rectifier, -48 VDC, 1000W

Diagrams



While every precaution has been taken to ensure accuracy and completeness herein, Vertiv assumes no responsibility, and disclaims all liability, for damages resulting from use of this information or for any errors or omissions. Specifications subject to change without notice.



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