



VERTIV™

eSURE™ RECTIFIER

R48-4000e



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R48-4000e



Features and Benefits

Rectifier, 48 VDC, 4000 W

- Optimized depth-reduced footprint allows installation in short-depth racks and cabinets
- DSP (Digital Signaling Processor) - means fewer components, optimized operation and active load sharing for increased reliability
- High efficiency, 95.3%-reduces power consumption for lower operating costs
- Hot pluggable-facilitates future extensions
- Wide input voltage range-operates in the most demanding environments where input voltage changes
- Wide temperature operating range (-40°C / -40 °F to +75°C / 167°F) -meets the harshest climatic environment requirements

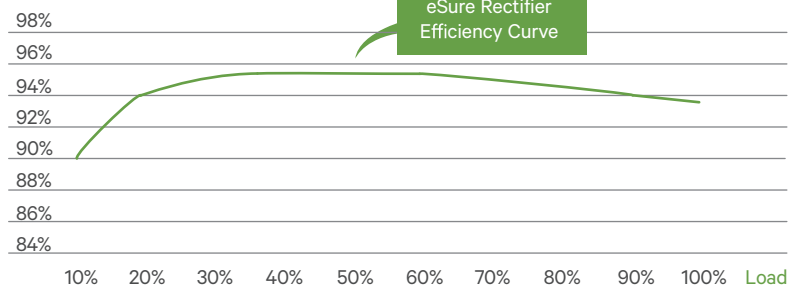
Description

The eSure™ R48-4000e rectifier converts standard AC supply voltages into stable nominal-48V DC voltage adjustable to the needs of the application. The R48- 4000e 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.



Efficiency



Technical Specifications

AC INPUT	
Input Voltage, Nominal	100 VAC to 250 VAC
Input Voltage, Permitted Variation	85 VAC to 300 VAC
Line Frequency	45 Hz to 65 Hz
Max Input Current	23.5 A
Power Factor	0.99
THD (Total Harmonic Distortion)	< 5% from 50 to 100% rated load

DC OUTPUT	
Output Voltage, Adjustment Range	-42 VDC to -58 VDC
Output Power	4000 W@Vout >48VDC
Output Power, Derated for Input Voltage	See diagram
Output Current	83.3 A
Output Current Limit Set Point	6.9 to 83.3 A
Psophometric noise (system)	95.3%
Peak Efficiency	< 2 mV at 70% max load
Temperature Derating	See diagram

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 Flashing Red LED: Fan Failure

ENVIRONMENTAL	
Temperature Range, Operating	-40°C to +75°C / -40°F to +167°F
Temperature Range, Storage	-40°C to +75°C / -40°F to +167°F
Relative Humidity	0 to 95%
Altitude	2000 m, 6560 ft at full power
EMC	ETSI EN300 386 Class A
Safety	IEC 60950, EN 60950

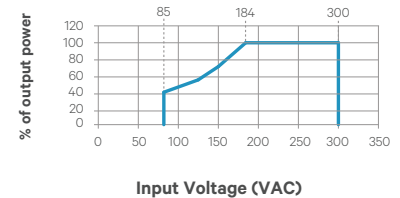
MECHANICS	
Dimensions (H x W x D)	132 x 85.3 x 293 (mm) / 5.2 x 3.36 x 11.5 (inches)
Weight	3.5 kg / 7.7 lbs

OTHER PARTS	
Controller Units	See separate ACU+ and SCU+ datasheets

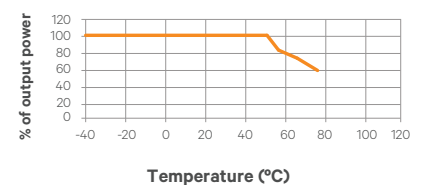
Ordering Information

PRODUCT CODE	DESCRIPTION
1R484000eXXX	Rectifier 48v, 4000w

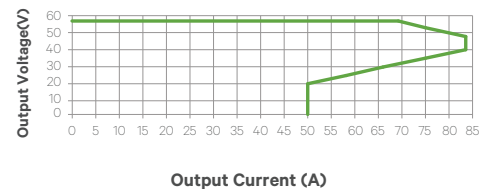
Output power vs. input voltage and $V_o > 48V_{at}$ $T_{amb} 50^\circ C$



Output Power vs. Temperature at $264V \geq U_{in} \geq 184VAC$



Output voltage vs. Output current at max. power 4000 W





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