

# Vertiv™ eSure™ Rectifier

R400-15000e

## Key Features

### Rectifier, 400 VDC, 15 kW

- 15 kW high-efficiency rectifier designed for 400V DC power applications
- Optimized depth – reduced footprint allows installation in short-depth racks and cabinets
- DSP (Digital Signal Processor) – means fewer components, optimized operation and active load sharing for increased reliability
- Compliant with global standards – delivers quality, performance and reliability no matter what the application or location demands
- High efficiency, peak 97% – reduces power consumption for lower operating costs
- Hot pluggable – facilitates future expansions and easy maintenance
- Wide input voltage range to operate in the most demanding environments
- Wide temperature operating range to meet the harshest climatic environments

*In addition to reducing power consumption and lowering operating cost, eSure™ high-efficiency rectifiers offer superior performance and uncompromised reliability.*

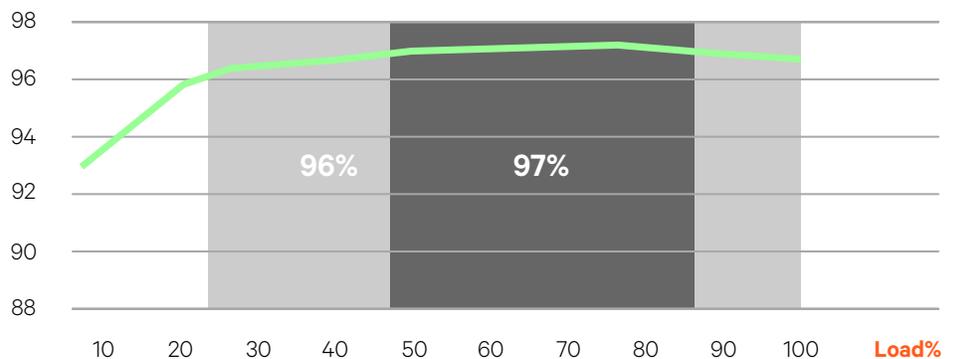
## Description

The 15 kW high-efficiency eSure rectifier (model R400-15000e) is designed to convert standard AC supply voltages into stable 400V DC voltage that is adjustable to application needs. The R400-15000e 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



R400-15000e Efficiency Curve at 480 VAC Nominal

## Technical Specifications

AC Input	R400-15000E
Voltage	260 VAC to 530 VAC (see figure 1) 380 VAC to 480 VAC (nominal)
Frequency	45 Hz to 65 Hz
Maximum Current	30 A
Power Factor	0.99

DC Output	
Voltage	290 VDC to 400 VDC
Maximum Power	15000 W @ $V_{out} > 336$ VDC
Maximum Current	44.6 A @ 400 VDC, and nominal input, limit set point 0 to 44.6 A (see figure 2)
Peak Efficiency	Peak 97%

Control and Monitoring	
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

Environmental	
Operating Temperature	-40°C to +65°C / -40°F to +149°F (see figure 3)
Storage Temperature	-40°C to +75°C / -40°F to +167°F
Relative Humidity	0 to 95%
Altitude	2000 m / 6560 ft at full power

Standards Compliance	
Safety	EN 60950-1, IEC 60950, UL 60950
EMC	EN55022, CISPR22, ETSI EN300 386: 2005, FCC CFR 47 Part 15, Telcordia GR-1089-CORE issue 6 (Class B conducted and radiated)
Environment	REACH, RoHS, WEEE

Mechanics	
Dimensions (H x W x D)	88 x 218 x 565 mm / 3.5 x 8.5 x 22 inches
Weight	10 kg / 22 lbs

## Ordering Information

Part Number	Description
1R40015000E	eSure™ rectifier, 400 VDC, 15 kW

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## Figures

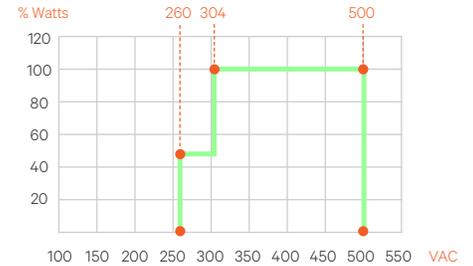


Figure 1: Output Power vs. Input Voltage at  $T_{amb} < 45^{\circ}\text{C}$

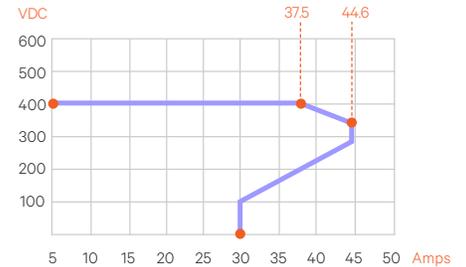


Figure 2: Output Voltage vs. Output Current at Maximum Output Power 15000 W

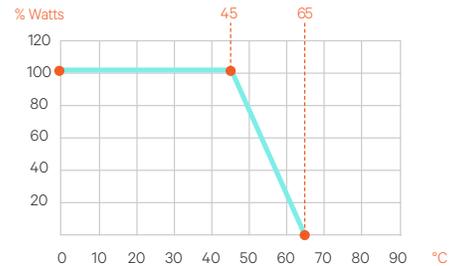


Figure 3: Output Power vs. Temperature at  $U_{in} > 340$  VAC,  $V_o > 336$  VDC