Vertiv[™] eSure[™] Rectifier

R48-5800e



Benefits

Rectifier, 48 VDC, 5800 W

- 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, near 96.2% - 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 from -40°C to +65°C / -40°F to +149°F meets the harshest climatic environment requirements

Description

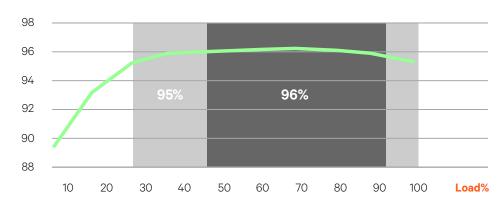
The eSure™ R48-5800e rectifier converts 260 to 530 VAC 3-phase supply voltages into stable nominal -48V DC voltage adjustable to the needs of the application. The R48-5800e is a constant power rectifier designed with the latest patented switch-mode technology using DSP (Digital Signal Processor) functionality 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.



R48-5800e

% Efficiency



R48-5800e Efficiency Curve at 380 VAC Nominal



Technical Specifications

AC Input	R48-5800E
Voltage	260 VAC to 530 VAC (see figure 1) 380 VAC to 480 VAC (nominal)
Frequency	45 Hz to 65 Hz
Maximum Current	13 A
Power Factor	0.99
DC Output	
Voltage	-42 VDC to -58 VDC
Maximum Power	5800 W @ Vout >48 VDC
Maximum Current	120A @ 48 VDC, limit set point 0 to 120 A (see figure 2)
Peak Efficiency	96.2%
Psophometric Noise (System)	<2 mV typical; <32 dBrnc typical
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; Flashing Red LED = Fan Failure
Environmental	
Operating Temperature	-40°C to +65°C / -40°F to +149°F (see figure 3)
Storage Temperature	-40°C to +70°C / -40°F to +158°F
Relative Humidity	0 to 95%
Altitude	2000 m / 6560 ft at full power
Standards Compliance	
Safety	60950 (EN and UL), Telcordia GR-63-CORE
EMC	ETSI EN 300 386 class B, FCC CFR 47 Part 15 class B, Telcordia GR-1089-CORE class B
Environment	REACH, RoHS, WEEE
Mechanics	
Dimensions (H x W x D)	85.5 x 245 x 380 mm / 3.37 x 9.65 x 14.96 inches
Weight	6.5 kg / 14 lbs

Part Number	Description
1R485800E	eSure™ rectifier, 48 VDC, 5800 W

Figures

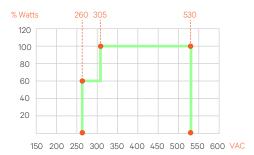


Figure 1: Output Power vs. Input Voltage at Tamb < 45°C

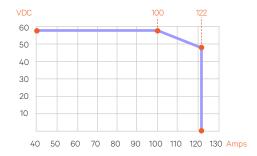


Figure 2: Output Voltage vs. Output Current at Maximum Output Power 5800 W

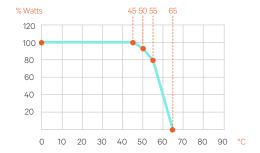


Figure 3: Output Power vs. Temperature at Uin > 304 VDC

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