

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

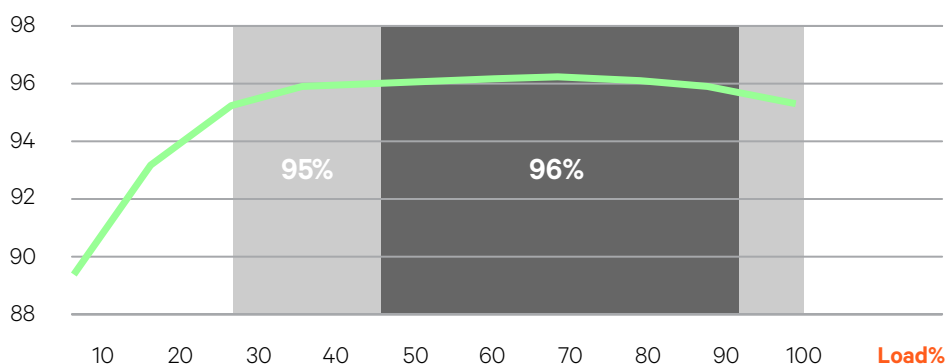
The eSure™ R48-5800e rectifier converts 260 to 530 VAC 3-phase supply voltages into stable nominal -48V DC voltage adjustable to the needs of the application. The R48-5800e is a constant power rectifier designed with the latest patented switch-mode technology using DSP (Digital Signal Processor) functionality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

Ordering information

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

Figures

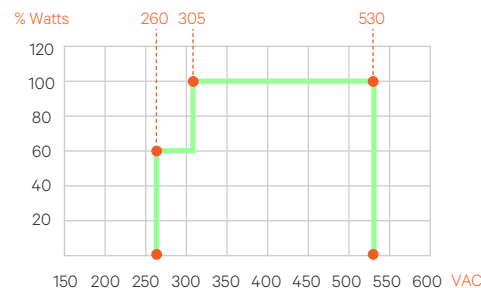


Figure 1: Output Power vs. Input Voltage at Tamb < 45°C

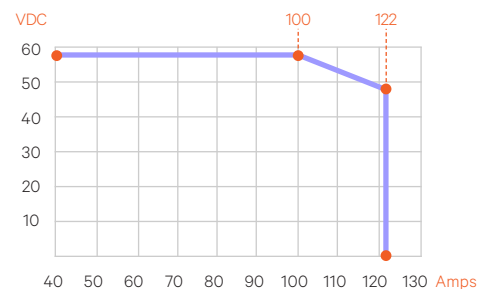


Figure 2: Output Voltage vs. Output Current at Maximum Output Power 5800 W

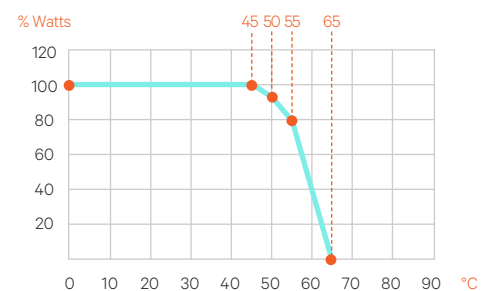


Figure 3: Output Power vs. Temperature at Uin > 304 VDC