Rectifier -48VDC, 500W

Features and Benefits

- Low rectifier/subrack height minimize space needed for power in embedded applications
- DSP (Digital Signaling 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, Maximum 91% efficiency 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 R48-500 rectifier converts standard AC supply voltages into stable nominal -48 VDC voltages adjustable to the needs of the application. The R48-500 is a constant power rectifier designed with the latest patented switch-mode technology using DSP (Digital Signaling Processor) functionality for efficient operation. For a larger load capacity, rectifiers can be connected in parallel and intelligent control can be added with the help of a separate controller.



R48-500



Technical Specifications, R48-500

AC Inpu

Input Voltage, Nominal 100 to 250 V AC
Input Voltage, Permitted Variation 85 to 300 V AC
Line Frequency 45 to 65 Hz
Max Input Current 6.8 A
Power Factor 0.99

THD (Total Harmonic Distortion) ≤5% for 50%-100% load

DC Output

Output Voltage, Adjustment Range -42 to -58 V DC
Output Power 500W@Vout >48VDC
Output Power, Derated for Input Voltage See Diagram
Output Current 10.5 A @ -48 VDC

Efficiency 91%

Psophometric Noise (System) ≤1mV; <32 dBrnc 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 to +75°C, -40 to +167°F Temperature Range, Storage -40 to +75°C, -40 to +167°F

Relative Humidity 0 to 95%

Altitude 2000 m, 6560 ft at full power

EMC ETSI EN 300 386 class B, FCC CFR 47 Part 15 class B, Telcordia GR-1089-CORE class B

Safety IEC 60950, EN 60950, UL 60950

Mechanic

Dimensions ($H \times W \times D$) 40.8 × 86.5 × 241mm (1.6 × 3.4 × 9.5 inches)

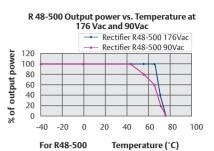
Weight 1.25 kg (2.76 lbs)

Other parts

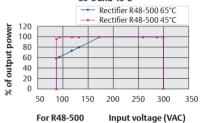
Controller Units See separate ACU+ and SCU+ datasheets

Ordering information

Product Name Rectifier R48-500



R 48-500 Output power vs. Input voltage at 65°C and 45°C



Emerson Network Power. The global leader in enabling Business-Critical Continuity™ AC Power
Connectivity
DC Power
Embedded Computing

Embedded Power

Monitoring
Outside Plant
Power Switching & Controls

Precision Cooling
Racks & Integrated Cabinets
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