

# Rectifier

-48 V DC, 1700 W

■ DC Power for  
Business-Critical Continuity

## Features and benefits

- Optimized depth reduced footprint allows installation in short-depth racks and cabinets.
- DSP (Digital Signaling Processor) means fewer components, optimized operation and active load haring for increased reliability.
- Compliant with global standards delivers quality, performance and reliability no matter what the application or location demands.
- High efficiency, up to 91% 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 to +80°C) – meets the harshest climatic environment requirements.
- AC input current limitation is possible on the rectifier. This function enables the user to employ 10 A AC breakers, or smaller, if desired.

The R48-1800 rectifier converts standard AC supply voltages into stable nominal -48 V DC voltage adjustable to the needs of the application. The R48-1800 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.



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## Technical Specifications

### AC Input

Input voltage, nominal	200 to 250 V AC $\pm$ 20%
Input voltage, permitted variation	85 to 300 V AC $\pm$ 10%
Line frequency	45 to 65 Hz
Max input current	12 A
Power factor	0.99
THD, Total harmonic distortion	<5% from 50 to 100% of rated load

### DC Output

Output voltage, adjustment range	-42 to 58 V DC
Output power	1700 W@Vout >48 V DC
Output power, derated for input voltage	See diagram
Output current	35.4 A
Output current limit set point	0 to 35.4 A
Efficiency	91%
Psophometric noise (system)	<1 mV at 5 to 100% of rated load <32 dBrc at 0 to 100% of rated 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 +70°C, see derating curve
Temperature range, storage	-40°C to +85°C
Relative humidity	0 to 95%
Altitude	2000 m, 6560 ft at full power
EMC	EN 300 386:2001 class B
Safety	IEC 60950, EN 60950, UL 60950

### Mechanics

Dimensions (HxWxD)	86x84.5x272 mm
Weight	2.4 kg

### Other Parts

Controller units See separate ACU and SCU datasheets

### Ordering Information

Product name  
Rectifier R48-1800

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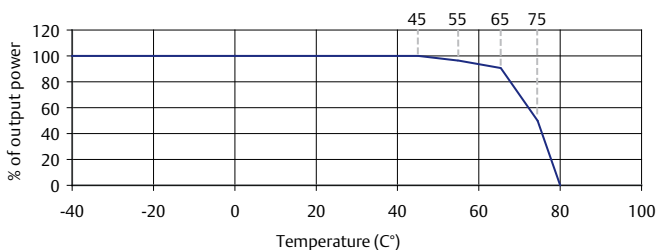
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Output power vs. Temperature at Uin >176 V AC



Output power vs. input voltage at Tamb <45°C

