

RECTIFIER MODULE

NESPACE Series Rectifier Module

2 kW 42 A 48 Vdc



NESPACE Rectifier Modules deliver outstanding reliability and world-leading power density.

Ideally suited for 48V telecom and other applications where wide input voltage ranges and high operating temperatures are required.

FEATURES

High efficiency and power density

Max efficiency 96%
1U height

Wide input voltage range

85-296 Vac 1ph

High operating temperature range

Operating -40 to +75° C, full power -40 to +55° C

High reliability

Efficient thermal design and self-protection features ensure high reliability
Hot swappable

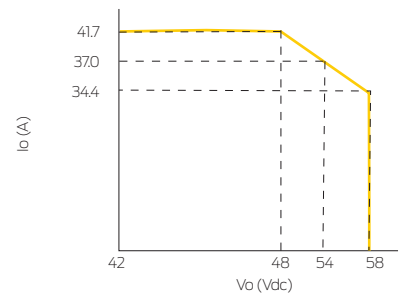
Excellent EMC performance

Low interference and low susceptibility

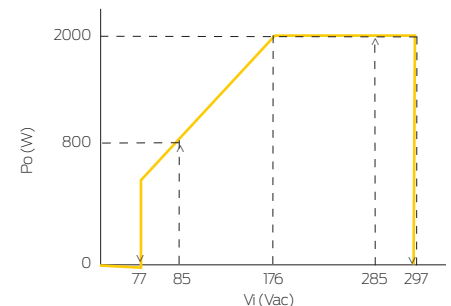
Worldwide certifications

UL and CE

Output Voltage vs Output Current



Output Power vs Input Voltage



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SPECIFICATIONS

AC Input

Nominal voltage	240 Vac 1ph
Range	85-296 Vac 1ph
Frequency	45~66 Hz
Inrush	25 A at nominal input, full load
Efficiency	Up to 96%
Power factor	>0.99 at 50% load or more
Protection	Under and over voltage Mains fuse in both lines

DC Output

Nominal voltage	54.0 Vdc
Range	42.0 - 58.0 Vdc
Output power	2000 W at ≥ 176 Vac input 1262 W at 120 Vac input 800 W at 85 Vac input
Output current	37 A at 54V, input ≥ 176 Vac 23 A at 54V, input 120 Vac 14.8 A at 54V, input 85 Vac
Line regulation	$\pm 0.5\%$ Max over entire input range
Load regulation	$\pm 0.5\%$ Max over entire load range
Ripple and noise	≤ 250 mV, p-p
Protection	Overvoltage at 59Vdc (recycle input to reset) Power de-rating Thermal shutdown

General Specifications

Cooling	Single fan (front to back airflow)
MTBF	>350,000 hours (25° C)
Acoustic noise	<55 dBA at nominal input and full load (ambient <40° C)
Operating temperature	-40 to +75° C (de-rated above 55° C)
Storage temp	-40 to +85° C
Humidity	$\leq 95\%$ non-condensing
H x W x L mm	44 (1U) x 108 x 340
Weight kg	2.2
Monitoring and control	NESPACE KA/KA2 Monitoring Control Unit
Communication protocol	CAN Bus

Standards

Safety	IEC 60950-1, UL 60950-1
EMC	EN 55022 Class A (emission) IEC 61000-4-2 (electrostatic discharge) IEC 61000-4-3 (radiated immunity) IEC 61000-4-4 (fast transients) IEC 61000-4-5 (surge immunity) IEC 61000-4-6 (conducted immunity) IEC 61000-4-10 (voltage dips) IEC 61000-4-11 (voltage interruptions) IEC 61000-3-3 (fluctuations & flicker)
Certification	UL, CE, CB