

RM-Series 48V Rectifier Modules

Common Applications: Telecom - Wireless and Outside Plant, Network, Broadband/Cable



RM-Series 48V Rectifiers

Product Description

The Eagle Eye **RM-48-3K** is a 3,000W high efficiency rectifier and is suited for today's critical power needs. This hot swappable rectifier is used as part of a system and provides constant, electric power control.

The Eagle Eye **RM-48-2K** is a 2,000W high efficiency rectifier and is suited for today's critical power needs. This hot swappable rectifier is used as part of a system and provides constant, electric power control.

Product Features

- High efficiency
- 1RU height
- Universal AC input
- DSP control; energy efficient operation
- Front Panel LED indicators
- Active PFC for ENG 1000-3-2 Class D Compliance
- Web-Based Software: TCP/IP, RS485 or 22, SNMP V3 (pending)

	RM-48-3K	RM-48-2K
General Specifications		
Operating Temperature	-40 – 75°C (-40 – 167°F) (derate 2%/°C above 45°C / 113°F)	-40 – 75°C (-40 – 167°F) (derate 2%/°C above 55°C / 131°F)
Operating Humidity	10 – 95% (non-condensing)	
Storage	-40 – 85°C (-40 – 185°C); 5 – 95% RH (non-condensing)	
Cooling	Intelligent fan; front to back airflow	
Acoustic Noise	< 60 dBA (nominal input, full load, Ta > 40°C (104°F)	< 55 dBA (nominal input, full load, Ta > 40°C (104°F)
Vibration	10 – 55 Hz, 2 G, 3 min Period, 60 min each (3 axes)	
Shock	20 G Peak Acceleration	
Reliability	>350 K Hours (per MIL STD 217F)	
Size	108.2 x 321.7 x 41 mm (4.26 x 12.67 x 1.61 in.)	
Weight	2.30 kg (5.07 lbs.)	2.18 kg (4.8 lbs.)
Insulation	3 KVAC I-O; 1.5 KVAC I-Earth; 0.5 KVDC O-Earth	
Emissions		
Emissions	EN55022 Level A (Conducted)	EN55022 Level B (Conducted)
Electrostatic Discharge	EN61000-4-2, 4 kV Contact/ 8 kV Air	
Radiated Susceptibility	EN61000-4-3, 26 MHz-2000 MHZ, 10 V/m, 80% AM	
EFT/Bursts	EN61000-4-4, 2 kV	
Surges	EN61000-4-5, 2 kV Earth, 1 kV Line-Line	
Conducted Immunity	EN61000-4-6, 150 KHz-80 MHz, 10 Vrms, 80% AM	
Voltage Dips	EN61000-4-10, 95% Dip,10 ms / 30% Dip, 500 ms	
Voltage Interruptions	EN61000-4-11, 95% reduction, 5 ms	
Fluctuations & Flicker	EN61000-3-3	



	RM-48-3K	RM-48-2K
Input Specifications		
Voltage	85 – 283 VAC (See derating for < 176 VAC)	
Frequency	45 – 63 Hz	
Inrush	≤ 25 A at 230 VAC Full load (Max cold start)	≤ 20 A at 230 VAC Full load (Max cold start)
Current	≤ 12 A at 230 VAC (Max continuous)	≤ 10 A at 230 VAC (Max continuous)
Protection	MAINS Fuse, each line (L, N); TVS for transients	15 A Fuse, each line (L, N); TVS for Transients
Leakage	< 3.5 mA at 264 VAC	
Input Protection	Input under voltage; output over voltage	
Efficiency	96% typical (40 – 60% load)	96% typical (30 – 70% load)
Harmonics	EN61000-3-2 Class D (>0.99PF; > 50% load)	
Output Specifications		
Output Volutage	54 VDC (typical)	
Output Current	55.5 A (3 KW max, continuous) at AC input ≥ 176 V	37 A (2 KW max, continuous) at AC input ≥ 176 V
Line Regulation	±0.5% across full input range	
Load Regulation	±0.5% across full load range	
Ripple	≤ 300 mV p-p; ≤ 20 mVrms (20 MHz BW)	≤ 250 mV p-p; ≤ 20 mVrms (20 MHz BW)
Output Adjustment	43.5 – 58 VDC	
Excursion	±3% max, 50% step load)	
Recovery	100 ms, max	
Over-Current	OCP (see power derating curves)	
Protection	OVP, power deratings, thermal shutdown	
Status Led & Communication		
Status LED/[Alarm]	Green=OK; Yellow=[Minor]; Red=[Major]	
Communication	CAN Bus	
Safety Standards		
UL/cUL	IEC/UL 60950-1 (pending)	IEC/UL 60950-1
CE Mark	Low voltage directive (pending)	Low voltage directive
NEBS	Designed to Meet Telcordia GR-63-CORE (pending)	

RM-48-3K	Rectifier Output		
Output Model	VDC	Io (Min)	Io (MaX)
RM-48-3K	54 V	0 A	55.5 A

RM-48-2K	Rectifier Output		
Output Model	VDC	Io (Min)	Io (MaX)
RM-48-2K	54 V	0 A	37 A

Ordering Information

No.	Model #	Description
1	RM-48-3K	48 V, 3 kW Rectifier Module
2	RM-48-2K	48 V, 2 kW Rectifier Module