



RM-Series 48V Rectifier Modules

Telecom

Network

Broadband

Utilities



Rectifier Module

Product Description

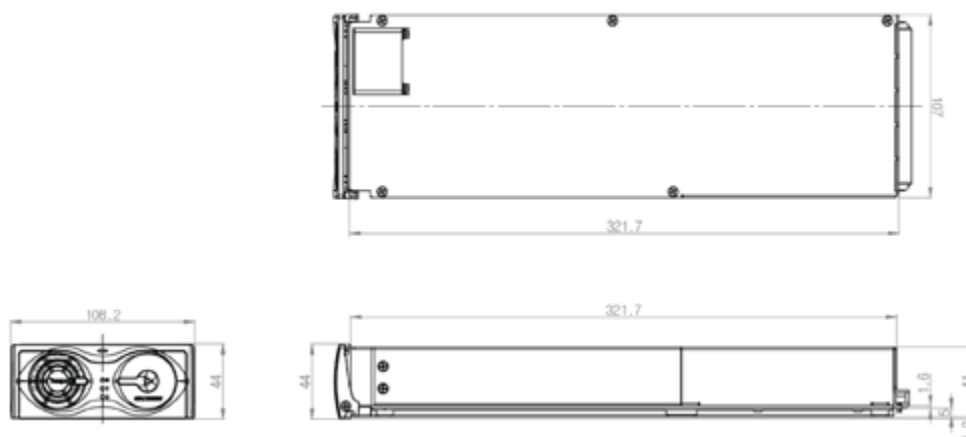
The Eagle Eye RM-Series includes 48V Rectifier Modules in 2kW or 3kW outputs. These hot swappable rectifiers are used as part of a system and provides constant, electric power control. The RM-Series is designed to be used with Eagle Eye's DCPS-Series DC Power Systems.

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)

| | 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 – 55Hz, 2 G, 3 min Period, 60 min each (3 axes) | |
| Shock | 20G Peak Acceleration | |
| Reliability | >350K 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, 4kV Contact/ 8 kV Air | |
| Radiated susceptibility | EN61000-4-3, 26MHZ –2000MHZ, 10 V/m, 80% AM | |
| EFT / bursts | EN61000-4-4, 2kV | |
| Surges | EN61000-4-5, 2kV Earth, 1kV Line-Line | |
| Conducted immunity | EN61000-4-6, 150 KHz-80MHz, 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 – 283VAC (See derating for < 176VAC) | |
| Frequency | 45 – 63Hz | |
| Inrush | ≤ 25A at 230VAC Full load (Max cold start) | ≤ 20A at 230VAC Full load (Max cold start) |
| Current | ≤ 12A at 230VAC (Max continuous) | ≤ 10A at 230VAC (Max continuous) |
| Protection | MAINS Fuse, each line (L, N); TVS for transients | 15 A Fuse, each line (L, N); TVS for transients |
| Leakage | < 3.5mA at 264 AC | |
| 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 | 54VDC (typical) | |
| Output Current | 55.5A (3kW max, continuous) at AC input ≥176V | 37A (2kW max, continuous) at AC input ≥176V |
| Line regulation | ±0.5% across full input range | |
| Load regulation | ±0.5% across full load range | |
| Ripple | ≤300mV p-p; ≤20mV rms (20MHz BW) | ≤250mV p-p; ≤20mV rms (20MHz BW) |
| Output adjustment | 43.5 – 58VDC | |
| Excursion | ±3% max, 50% step load) | |
| Recovery | 100ms, 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 |



Ordering Information

| Model No. | Description |
|-----------|--|
| RM-48-3K | 48V, 2kW Rectifier Module for DC Power Shelf |
| RM-48-2K | 48V, 3kW Rectifier Module for DC Power Shelf |