

Ultra Compact DC Power

1-8K WATTS COMMUNICATIONS

FEATURES

- Ultra compact design
- World leading power density
- Fully featured Telecom grade rectifiers
- Network and Remote monitoring
- Redundancy N+1 operation
- Current sharing rectifier modules
- -48V and +24V systems



SPECIFICATIONS - TYPICAL RM SERIES RECTIFIER

INPUT

Voltage	230V ac
Voltage range	90-300V ac (reduced power below 175V ac)
Frequency range	45-65 Hz
Power factor	0.99
Efficiency	>91% (>50% output power)
Input fuses	HCR fuses in phase and neutral
Maximum input current	7A to 12A model dependant

PROTECTION

Input voltage	Auto shutdown, auto restart when correct voltage restored
Input inrush	<2x maximum input current

OUTPUT

Voltage	See table
Voltage range	See table
Maximum current	See table
Regulation line	±0.1%
Regulation load	±0.5% (no load to full load)
Hold-up time	>15ms for 20% output voltage drop
Start-up time	Start up delay 1 second

PROTECTION

Current limit	Adjustable to 50-100% of maximum rated
Over temperature	Automatic current turndown, backup shutdown protection
Polarity reversed	Output fuse with crowbar diode
Over voltage	Adjustable limit

NOISE

Ripple <100Hz	<1mV rms unweighted
Voice band 100Hz - 5KHz	<1mV rms psophometric
Wide band 5KHz - 1MHz	<5mV rms unweighted
Peak to Peak	<50mV peak to peak
Isolation	Input to output 300V AC, Input to chassis 2500V AC Output to chassis 1500V AC

ENVIRONMENTAL

Ambient temperature :	
Nominal	25 +/-5°C
Range	-10°C to 70°C (maximum output power derated above +50°C)
Storage temperature	-20°C to +70°C
Humidity	5-95%% RH non condensing
Altitude	<2500m, De-rate maximum ambient temperature by 4°C per 1000m above sea level

STANDARDS

Safety	EN60950
Electrostatic discharge	CISPR24
Radiated Radio Frequency	CISPR22
AC harmonics	EN61000-3-2
AC flicker & fluctuation	EN61000-3-3.
Other	CE & RoHS compliant
MECHANICAL	
Dimensions	111.5W, 44H, 282Dmm
Weight	1.5kg
Cooling	Forced cooled

SM SUPERVISORY MODULE

The SM31 and SM32 are microcontroller based supervisory module provides the control and monitoring functions for both the RM series rectifiers and CM series DC/DC converters.

The supervisory module monitors all power system conditions including DC voltage rectifiers current, battery current, battery temperature and distribution failures. Visual notification of alarm conditions are given by LED's and display mounted on the front.

CONTROL AND COMMUNICATIONS

- 4 line x 16 character alpha numeric display
- Remote notification enabled by relay contacts
- Serial control for up to 126 rectifier / converters
- Temperature compensation
- Battery current limiting
- Low Voltage Disconnect control
- Setup from front panel
- Fast charge control and timer
- LCD display of parameters
- Multiple digital and analogue I/O expansion options
- 10/100 LAN- SM32: Remote system and battery management






MODEL

DESCRIPTION

SM31	Basis supervision
SM32	RS232 or TCP/IP using SNMP, built in web based configuration allowing setup of system parameters using a web browser

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19" SHELF CONFIGURATION	MAX NO. OF RECTIFIERS	MAX SHELF CURRENT	DC DISTRIBUTION
	2	83A	1x 63A load MCB 1x 63A battery MCB
	2	83A	3x 20A load MCB 2x 30A battery MCB
	3	125A	2x 10A, 2x 20A, 2x32A load MCB 2x 63A battery MCB
	3	125A	8x 10A, 4x 20A, 4x30A load MCB 2x 100A battery MCB
	4	150A	2 x 20A 2 x 63A load MCB 2 x 100A battery MCB 150A battery LVD

RM Series Rectifiers Models

MODEL	VOLTAGE RANGE	MAXIMUM CURRENT	AC INPUT	TEMPERATURE
RM1048	-48V (43-60V)	21A	90-300V AC	-10 to 70 degC
RM1860/48	-48V (43-60V)	30A	90-300V AC	-10 to 70 degC
RM2048XP	-48V (43-60V)	41.7A	90-300V AC	-10 to 70 degC
RM2048/24	+24V (21-30V)	41.7A	90-300V AC	-10 to 70 degC