

**DESCRIPTION**

Unipower Telecom's Ranger Series are hot-swappable, modular rectifiers which produce 25 or 50 amperes at 54.4VDC (48V versions), 50 or 100 amperes at 27.2VDC (24V versions) or 100 amperes at 13.6VDC (12V version). These switching rectifier modules are compact with up to 11 watts/cu.inch power density, taking up only 3.5 inches (two rack spaces) of height. They are ideally suited for both wireless and wireline applications.

Three RRPI rectifier modules in a companion 19-inch shelf produce up to 75A at 54.4VDC, 150A at 27.2VDC or 300A at 13.6VDC; four RRPI modules in a 23-inch shelf produce up to 100A at 54.4VDC, 200A at 27.2VDC or 400A at 13.6VDC.

Three RRSI rectifier modules in a 19-inch shelf produce up to 150A at 54.4VDC or 300A at 27.2VDC; four RRSI modules in a 23-inch shelf produce up to 200A at 54.4VDC or 400A at 27.2VDC.

The rectifier modules have automatic load sharing and ORing diodes, so they can be added or replaced while the system is operating. The output voltage of each rectifier module can be adjusted over 45-58, 22.5-29 or 11.25-14.5VDC from a pot on the front panel, or all modules can be adjusted simultaneously from a remote analog input.

**SAFETY CERTIFICATIONS**

UL60950  
CSA22.2, No. 60950  
EN60950

**TWO-YEAR WARRANTY**

**RRPI & RRSI SERIES**

**RECTIFIER MODULES**

MODEL	NOMINAL OUTPUT	FACTORY SET OUTPUT	MAX. OUTPUT CURRENT	INPUT VAC
RRPI48/25	48VDC	54.4V	25A	85-264
RRPI24/50	24VDC	27.2V	50A	85-264
RRPI12/100	12VDC	13.6V	100A	85-264
RRSI48/50	48VDC	54.4V	50A	170-264
RRSI24/100	24VDC	27.2V	100A	170-264

**SHELVES**

MODEL	WIDTH	HEIGHT	NO. MODULES
RRS2U-19	19" (483MM)	3.5" (89MM)	3
RRS2U-23	23" (584MM)	3.5" (89MM)	4

**FEATURES**

- ◆ Two Mounting Positions High: 3.5"
- ◆ 85-264 or 170-264VAC Input Range
- ◆ Low Energy Cost: 0.99 Power Factor
- ◆ Active Load Sharing
- ◆ Output Voltage Range:  
45-58, 22.5-29 or 11.25-14.5VDC
- ◆ Group or Individual Remote Output Adjustment\*
- ◆ Battery Temp. Compensated Charge Regulation\*
- ◆ 87% Efficiency
- ◆ Up to 11W/Cu. Inch Power Density
- ◆ Hot Swappable
- ◆ Integral ORing Diodes
- ◆ Class B EMI Filter

\* With external controller

# SPECIFICATIONS, RANGER RRPI & RRSI MODULES

Typical at Nominal Line, Full Load and 25°C Unless Otherwise Noted.

### INPUT

Voltage Range .....	85-264 or 170-264VAC
Power Factor .....	0.98
Total Harmonic Distortion, Max. ....	5%
Frequency .....	47-63Hz
Inrush Current Limiting .....	25A Peak
Input Current, Full Load, RRPI .....	13.4A@120VAC
RRSI .....	14.0A@230VAC
EMI Filter, Conducted .....	FCC20780 pt. 15J Curve B
EN55022 Curve B .....	
Input Immunity, Conducted	
Fast Transients, Line-Line .....	±2kV (EN61000-4-4 Level 3)
Surges, Line-Line .....	±1kV (EN61000-4-5 Level 2)
Surges, Line-Ground .....	±2kV (EN61000-4-5 Level 3)
Analog Voltage Adjust .....	0 to +5V

### OUTPUT

Current & Voltage <sup>1</sup> .....	25 or 50A@54.4VDC
.....	50 or 100A@27.2VDC
.....	100A @13.6VDC
Voltage Adjustment Range, 48V Nominal .....	45-58VDC
24V Nominal .....	22.5-29VDC
12V Nominal .....	11.25-14.5VDC
Total Regulation, Max. ....	1.0%
Holdup Time .....	20msec.
Overvoltage Protection, 48V Out .....	59V
24V Out .....	29V
12V Out .....	15V
Filtering: Wideband Noise, 20MHz BW	
48V Out, P-P .....	500mV
24V Out, P-P .....	250mV
12V Out, P-P .....	125mV

Voice Band Noise .....	<32dBmC
Current Limit .....	105% Rated Current
Efficiency .....	87%

**SAFETY STANDARDS** ..... UL60950, CSA22.2 No.60950, EN60950

### STATUS INDICATORS

AC Good .....	Logic LO Output
DC Good .....	Logic LO Output
Thermal Alarm .....	Logic LO Output

### ENVIRONMENTAL

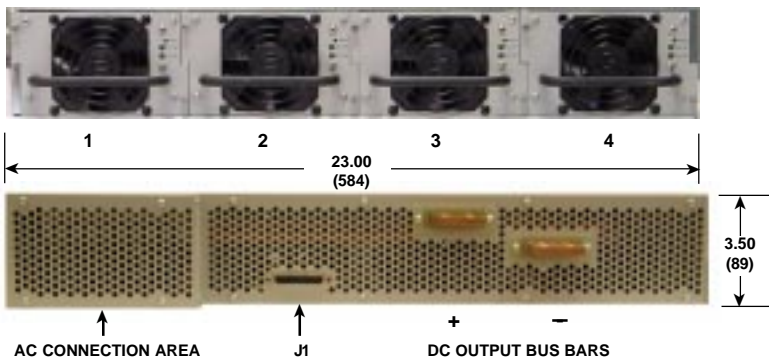
Operating Temp. Range .....	-20°C to +70°C
Output Current Derating .....	2.5%/°C, 50°C to 70°C
Storage Temp. Range .....	-40°C to + 85°C
Humidity .....	0% to 95%, Non-Condensing
ESD .....	Bellcore GR-1089-Core and EN61000-4-2
Cooling .....	Internal Fans

### PHYSICAL SPECIFICATIONS

Case Material, Rectifier Module .....	Aluminum
Finish, Shelf .....	Powder Coat Gray
Dimensions, Inches (mm)	
Rectifier Module .....	3.3 H x 4.9 W x 13.1 D (84 x 124 x 333)
19" Shelf .....	3.50 H x 19.00 W x 19.88 D (89 x 483 x 505)
23" Shelf .....	3.50 H x 23.00 W x 19.88 D (89 x 584 x 505)
Weight, Rectifier Module .....	10.15 lbs. ( 4.60 kg.)

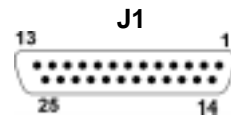
**NOTE:** 1. Voltage set at factory.

Brackets are available for mounting the 19-inch shelf in a 23-inch rack. Order No. 775-1437-0000 (set of two).



J1 SIGNAL CONNECTOR			
PIN	FUNCTION	PIN	FUNCTION
1	Inhibit	14	AC Good-1
2	Thermal Alarm-1	15	DC Good-1
3	Current Monitor-1	16	AC Good-2
4	Thermal Alarm-2	17	DC Good-2
5	Current Monitor-2	18	AC Good-3
6	Thermal Alarm-3	19	DC Good-3
7	Current Monitor-3	20	AC Good-4*
8	Thermal Alarm-4*	21	DC Good-4*
9	Current Monitor-4*	22	N.C.
10	Current Share	23	-Sense
11	+ Sense	24	Remote Adjust-1
12	Remote Adjust-2	25	Remote Adjust-3
13	Remote Adjust-4*		

\* These pins are No Connection on 19-inch shelf



Connector: AMP747846-4  
Mate: AMP747912-2

**MATING CONNECTOR KIT**  
Order Kit No.  
775-1441-0000

**ALL DIMENSIONS IN INCHES (mm).**  
All specifications subject to change without notice.

