

**DESCRIPTION**

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

Three rectifier modules in a companion 19-inch shelf produce up to 150A at 54.4VDC or 300A at 27.2VDC; four rectifier 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 or 22.5-29VDC from a pot on the front panel, or all modules can be adjusted simultaneously from a remote analog input.

**SAFETY CERTIFICATIONS**

UL1950  
CSA22.2, No. 950  
EN60950

**TWO-YEAR WARRANTY**

**RRS SERIES**

**RECTIFIER MODULES**

MODEL	NOMINAL OUTPUT	FACTORY SET OUTPUT	MAX. OUTPUT CURRENT
RRS48/50	48VDC	54.4V	50A
RRS24/100	24VDC	27.2V	100A

**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"
- ◆ 170-264VAC Input Range
- ◆ Low Energy Cost: 0.99 Power Factor
- ◆ Active Load Sharing
- ◆ Output Voltage Range: 45-58 or 22.5-29VDC
- ◆ Group or Individual Remote Output Adjustment\*
- ◆ Battery Temp. Compensated Charge Regulation\*
- ◆ 84% Efficiency
- ◆ High Power Density: 11W/Cu. Inch
- ◆ Hot Swappable
- ◆ Integral ORing Diodes
- ◆ Class B EMI Filter

\* With external controller

www.psui.com  
1-800-966-PSUI (7784)

## SPECIFICATIONS, RANGER (RRS) SERIES

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

### INPUT

Voltage Range .....	170-264VAC
Power Factor .....	0.98
Total Harmonic Distortion, Max. ....	5%
Frequency .....	47-63Hz
Inrush Current Limiting .....	25A Peak
Input Current, Full Load .....	14.4A@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> .....	50A@54.4VDC
.....	100A@27.2VDC
Voltage Adjustment Range, 48V Nominal .....	45-58VDC
24V Nominal .....	22.5-29VDC
Total Regulation, Max. ....	1.0%
Holdup Time .....	20msec.
Overvoltage Protection, 48V Out .....	59V
24V Out .....	29V
Filtering: Wideband Noise, 20MHz BW	
48V Out, P-P .....	500mV
24V Out, P-P .....	250mV
Voice Band Noise .....	<32dBmC
Current Limit .....	105% Rated Current
Efficiency .....	85%

**SAFETY STANDARDS** ..... UL1950, CSA22.2-950, EN60-950

### STATUS INDICATORS

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

### ENVIRONMENTAL

Operating Temp. Range .....	0°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 & Copper
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.)

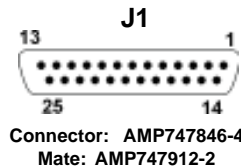
**NOTE:** 1. Voltage set at factory.

Brackets are available for mounting the 19-inch shelf in a 23-inch rack. Order No. 775-1437-0000 (set of two) for \$18.00.

### REAR SHELF

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

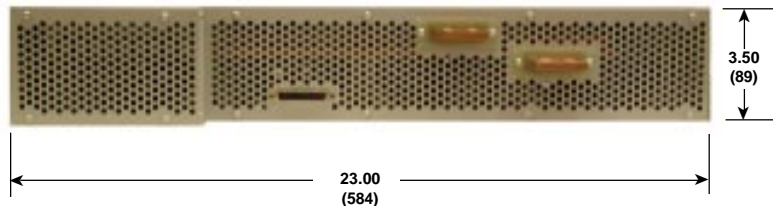


MATING CONNECTOR KIT
Order Kit No. 775-1441-0000 \$5.00

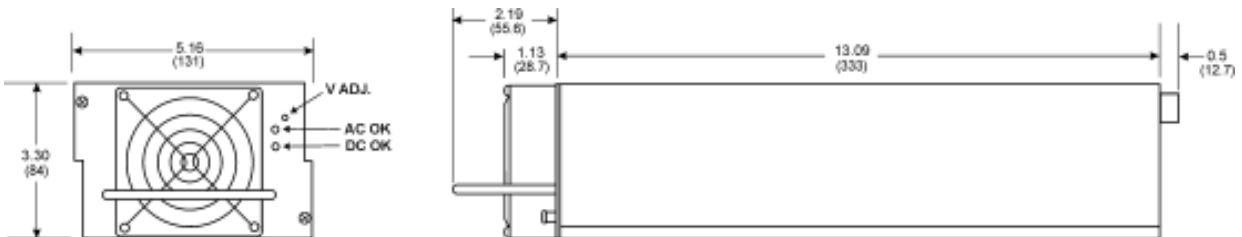
### FRONT VIEW



### BACK VIEW



### RECTIFIER MODULE



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

7/10/01/RAN7