

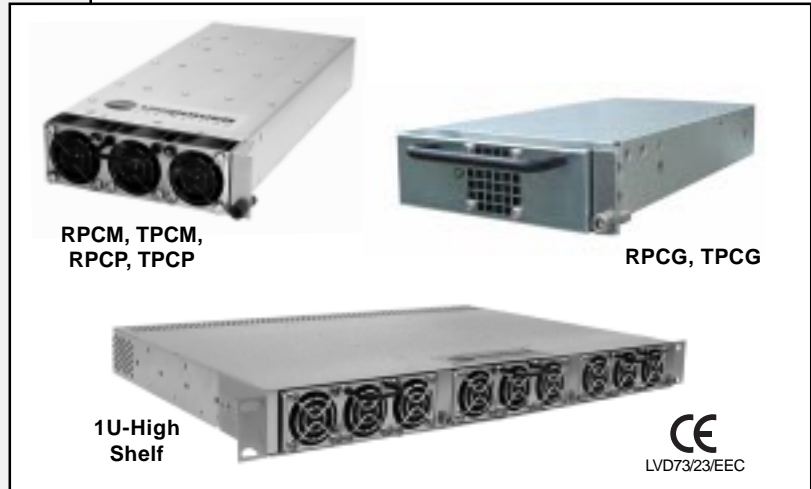
**DESCRIPTION**

Unipower Telecom's Radian Series are hot-swappable, modular rectifiers which produce up to 1200 watts output. There are 18 different models with different output voltages and power levels. The modules are ultra-compact with power density up to 15 watts per cubic inch. Companion 19-inch shelves hold up to three rectifiers which can also be operated in a 2+1 redundant mode. The modules have automatic load sharing and output ORing diodes so they can be hot-swapped while the system is operating. Module output voltage can be controlled by 0V to +5V analog input.

Green LEDs indicate AC and DC power good. The rectifiers also have control and monitoring features and a +5V standby output. Operating temperature range is -20°C to +70°C.

**FEATURES**

- ◆ 1U- High: 1.72"
- ◆ -20°C to +70°C Operation
- ◆ Wide Range Input: 85-264VAC
- ◆ Up to 1200W Module Output
- ◆ Up to 3600W Shelf Output
- ◆ 0.99 Power Factor
- ◆ Output Voltages: 12 to 54.4VDC
- ◆ 80-87% Efficiency
- ◆ Power Density to 15W/Cu. Inch
- ◆ Hot Swappable
- ◆ Integral ORing Diodes
- ◆ Class B EMI Filter
- ◆ LED Indicators
- ◆ I<sup>2</sup>C Serial Data Option

**TWO-YEAR WARRANTY**

**RECTIFIER MODULES**

MAX. POWER	OUTPUT VOLTAGE	OUTPUT CURRENT	MODEL NO.
1200W	54.4VDC	22.0A	RPCP48/22
800W	54.4VDC	15.0A	RPCM48/15
435W	54.4VDC	8.0A	RPCG48/8
1200W	48.0VDC	25.0A	TPCP7000
800W	48.0VDC	16.7A	TPCM7000
450W	48.0VDC	9.4A	TPCG7000
900W	27.2VDC	33.0A	RPCP24/33
680W	27.2VDC	25.0A	RPCM24/25
400W	27.2VDC	15.0A	RPCG24/15
1000W	24.0VDC	41.7A	TPCP5000
700W	24.0VDC	29.2A	TPCM5000
400W	24.0VDC	16.7A	TPCG5000
680W	13.6VDC	50.0A	RPCP12/50
600W	13.6VDC	45.0A	RPCM12/45
370W	13.6VDC	27.0A	RPCG12/27
800W	12.0VDC	66.7A	TPCP3000
650W	12.0VDC	54.2A	TPCM3000
370W	12.0VDC	30.8A	TPCG3000

**19-INCH SHELVES**

RECTIFIER MODULES	HEIGHT	DEPTH	AC CONN.	MODEL NO.
RPCG, TPCG RPCM, TPCM	1U (1.72")	11.56"	C14	TPCMR1U3
RPCP, TPCP	1U (1.72")	12.66"	Term. Blk.	TPCPR1U3A
RPCP, TPCP	1U (1.72")	13.15"	C20	TPCPR1U3B
RPCP, TPCP	1U (1.72")	14.88"	C20*	TPCPR1U3C

\*Has extra input filter

**SAFETY CERTIFICATIONS**

UL60950  
CSA22.2, No. 60950  
EN60950

**OPTION**

CODE	DESCRIPTION
Z	I <sup>2</sup> C Serial Data Bus

NOTE: Add Option Code as suffix to model number.

[www.unipowertelecom.com](http://www.unipowertelecom.com)

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## SPECIFICATIONS, RADIAN SERIES MODULES

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

### INPUT

Voltage Range ..... 85-264VAC  
 Power Factor ..... 0.99  
 Total Harmonic Distortion, Max. .... 5%  
 Frequency ..... 47-63Hz  
 Inrush Current Limiting, Max. .... 50A Peak  
 EMI Filter, Conducted ..... FCC20780 pt. 15J Curve B  
 ..... EN55022 Curve B  
 Fast Transients ..... EN61000-4-4  
 Surges ..... EN61000-4-5  
 Analog Voltage Adjust ..... 0 to +5V  
 Input Protection ..... Internal Fuse, 20A

### OUTPUT

Current & Voltage ..... See Table  
 Output Power ..... 370-1200W  
 Voltage Adjustment Range, Approx. .... 29%  
 Standby Output ..... +5V@250mA  
 Line & Load Regulation, Max. .... 2.0%  
 Holdup Time ..... 20msec.  
 Overvoltage Protection ..... Latch Off  
 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 ..... 80-87%

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

### STATUS INDICATORS

AC Good<sup>1</sup> ..... Green LED & Logic LO Output  
 DC Good ..... Green LED & Logic LO Output

### ENVIRONMENTAL

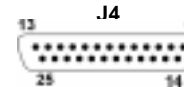
Operating Temp. Range ..... -20°C to +70°C  
 Output Current Derating ..... 2.5%/°C, 50°C to 70°C  
 Storage Temp. Range ..... -40°C to +85°C  
 Humidity ..... 0% to 95%, Non-Condensing  
 ESD ..... Bellcore GR-1089-Core and EN61000-4-2  
 MTBF, 35°C (Bellcore) ..... 200,000 Hours  
 Cooling ..... Integral Ball Bearing Fans

### PHYSICAL SPECIFICATIONS

Case Material, Rectifier Module ..... Aluminum  
 Shelf ..... Aluminum  
 Dimensions, Inches (mm)  
 Rectifier Module<sup>2</sup> ..... 1.60 H x 5.00 W x 10.00 D  
 (40.6 x 127 x 254)  
 19" Shelf, TPCMR1U3 ..... 1.72 H x 19.00 W x 11.56 D  
 (44 x 483 x 294)  
 19" Shelf, TPCPR1U3 ..... 1.72 H x 19.00 W x 13.15 D  
 (44 x 483 x 334)  
 Weight  
 Rectifier Module ..... 3.15 lbs. (1.43 kg.)  
 19" Shelf ..... 3.75 lbs. (1.70 kg.)

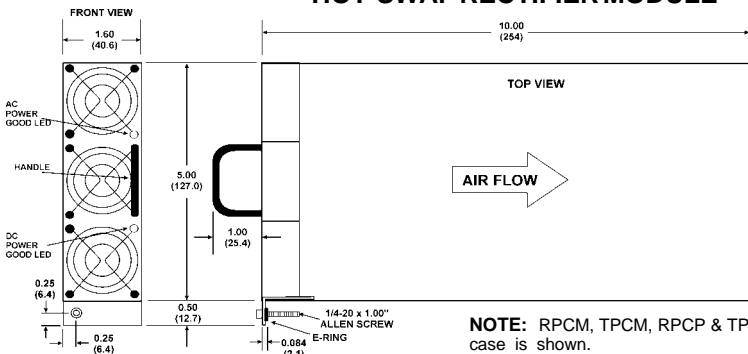
**NOTE:** 1. RPCG & TPCG do not have this.  
 2. RPCG & TPCG depth is 10.16 inches (258mm).

### J4 SIGNAL CONNECTOR



Positronic SD25F0S500X  
 with FC7520D pins

### HOT-SWAP RECTIFIER MODULE

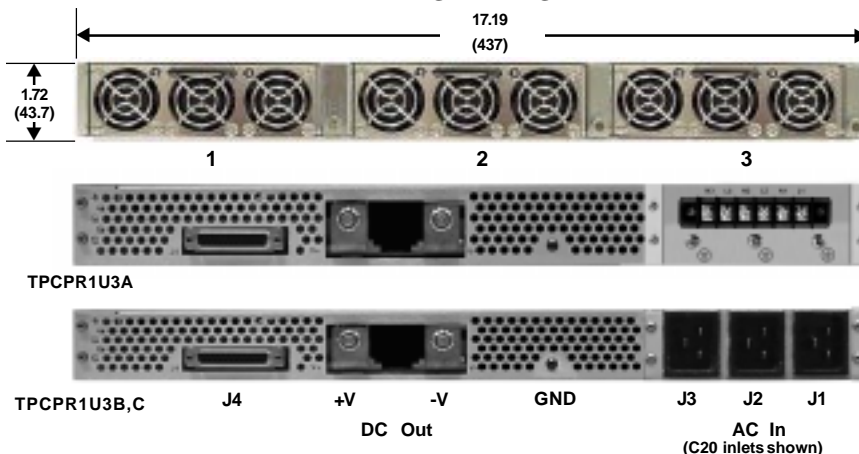


J4 PIN CONNECTIONS			
PIN	FUNCTION	PIN	FUNCTION
1	Inhibit	14	AC Power Good - 1
2	Overtemp. Warning - 1*	15	DC Power Good - 1*
3	Current Monitor - 1*	16	AC Power Good - 2
4	Overtemp. Warning - 2*	17	DC Power Good - 2*
5	Current Monitor - 2*	18	AC Power Good - 3
6	Overtemp. Warning - 3*	19	DC Power Good - 3*
7	Current Monitor - 3*	20	Module Present - 1
8	+5V Standby	21	Module Present - 2
9	SDA	22	Module Present - 3
10	Current Share	23	- Sense
11	+Sense	24	Remote Adjust - 1
12	Remote Adjust - 2	25	Remote Adjust - 3
13	SCL		

\* These pins are open when I<sup>2</sup>C option is used.

**NOTE:** Standby return is connected to -Sense lead. Current rating of +5V standby is 250mA. All signals are referenced to -Sense lead.

### SHELVES



### RADIAN 19-INCH SHELVES

There is one shelf model for the RPCG, TPCG, RPCM and TPCM modules, and three shelf models for the RPCP and TPCP modules. The A, B, and C versions of the TPCPR1U3 shelf have rear housings that extend 1.10" (27.9mm), 1.59" (40.4mm) and 3.32" (84.3mm), respectively, beyond the 11.56" (294mm) shelf depth. The "C" version of the TPCPR1U3 shelf includes an AC line filter with each IEC 60320 C20 AC inlet. For further information, see the shelf data sheets. Brackets are available for mounting the 19-inch shelves in a 23-inch rack. Order No. 775-1451-0000 (set of two).

rpcg-rpcm-rpcp.pdf  
 revJ-01-12-05

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