

DESCRIPTION

Unipower Telecom's Radian Series are hot-swappable, modular rectifiers which produce up to 22 amperes at 54.4VDC (48V version), 33 amperes at 27.2VDC (24V version) or 50 amperes at 13.6VDC (12V version). There are nine different models. These switching rectifier modules are extremely compact with high power density (up to 15W/cu. inch), taking up only 1.72 inches (one RU) of rack space. They are ideally suited for wireless telecom sites and networking applications.

Three rectifier modules in a companion 19-inch shelf produce up to 66A at 54.4VDC, 99A at 27.2VDC or 150A at 13.6VDC. Operated in a 2+1 redundant mode, the output current is up to 44A at 54.4VDC, 66A at 27.2VDC or 100A at 13.6VDC. 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 all modules can be controlled simultaneously over 44-58, 22-29 or 11-14.5 VDC from a remote 0V to +5V analog input.

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

There are mating 19-inch shelves for the RPCG, RPCM and RPCP rectifier modules. See back page for more information.

SAFETY CERTIFICATIONS

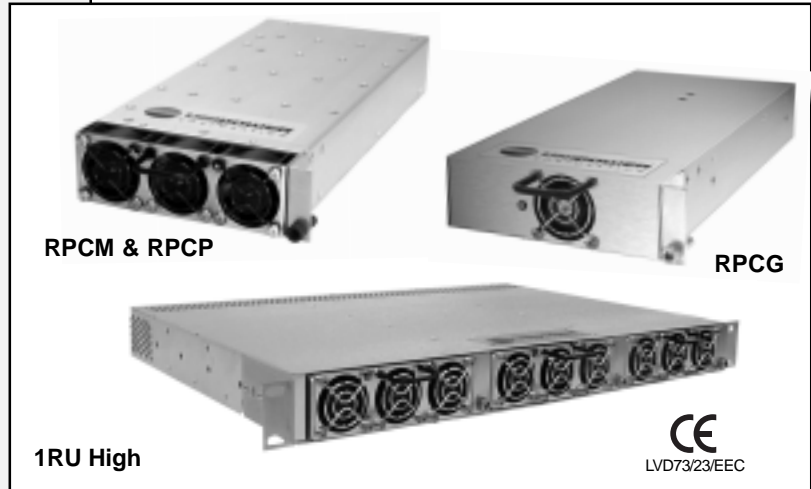
UL60950
CSA22.2, No. 60950
EN60950

TWO-YEAR WARRANTY

OPTION

CODE	DESCRIPTION
Z	I ² C Serial Data Bus

NOTE: Add Option Code as suffix to model number.



RECTIFIER MODULES

MODEL	NOMINAL OUTPUT	FACTORY SET OUTPUT	MAX. OUTPUT CURRENT
RPCP48/22	48VDC	54.4V	22A
RPCP24/33	24VDC	27.2V	33A
RPCP12/50	12VDC	13.6V	50A
RPCM48/15	48VDC	54.4V	15A
RPCM24/25	24VDC	27.2V	25A
RPCM12/45	12VDC	13.6V	45A
RPCG48/8	48VDC	54.4V	8A
RPCG24/15	24VDC	27.2V	15A
RPCG12/27	12VDC	13.6V	27A

19-INCH SHELVES

MODEL	HEIGHT	DEPTH	RECTIFIER MODULES	AC CONN.
TPCMR1U3	1U (1.72")	11.56"	3 TPCM/TPCG	C14
TPCPR1U3A	1U (1.72")	12.66"	3 TPCP	Term. Blk.
TPCPR1U3B	1U (1.72")	13.15"	3 TPCP	C20
TPCPR1U3C	1U (1.72")	14.88"	3 TPCP	C20

FEATURES

- ◆ One Rack Unit High: 1.72"
- ◆ -20°C to +70°C Operation
- ◆ Wide Range Input: 85-264VAC
- ◆ Up to 66A at 54.4V, 99A at 27.2V or 150A at 13.6V
- ◆ 0.99 Power Factor
- ◆ Output Voltage Range: 11-14.5, 44-58 or 22-29V
- ◆ 82-87% Efficiency
- ◆ Power Density to 15W/Cu. Inch
- ◆ Hot Swappable
- ◆ Integral ORing Diodes
- ◆ Class B EMI Filter
- ◆ LED Indicators
- ◆ I²C Serial Data Option

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SPECIFICATIONS, RADIAN RPCG, RPCM & RPCP SERIES

Typical at Nominal Line, Full Load and 25°C Unless Otherwise Noted (RPCG/RPCM/RPCP).

INPUT

Voltage Range	85-264VAC
Power Factor	0.99
Total Harmonic Distortion, Max.	5%
Frequency	47-63Hz
Inrush Current Limiting	50A Peak
Input Current, Full Load	4.2/8.1/11.9A@120VAC
	2.2/4.2/6.2A@230VAC
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 ¹	8/15/22A@54.4VDC
	15/25/33A@27.2VDC
	27/45/50A@13.6VDC
Voltage Adjustment Range, 48V Nominal	44.0-58.0VDC
24V Nominal	22.0-29.0VDC
12V Nominal	11.0-14.5VDC
Standby Output	+5V@250mA
Line & Load Regulation, Max.	2.0%
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	<32dBm
Current Limit	105% Rated Current
Efficiency	82-87%

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

STATUS INDICATORS

AC Good	Green LED & Logic LO Output
DC Good	Green LED & Logic LO Output

ENVIRONMENTAL

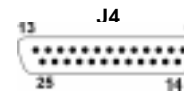
Operating Temp. Range	-20°C to +70°C
Output Current Derating	2.5%/°C, 50°C to 70°C
Storage Temp. Range	-40°C to +85°C
Humidity	0% to 95%, Non-Condensing
ESD	Bellcore GR-1089-Core and EN61000-4-2
MTBF, 35°C (Bellcore)	200,000 Hours
Cooling	Integral Ball Bearing Fans

PHYSICAL SPECIFICATIONS

Case Material, Rectifier Module	Aluminum
Shelf	Aluminum
Dimensions, Inches (mm)	
Rectifier Module	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.)

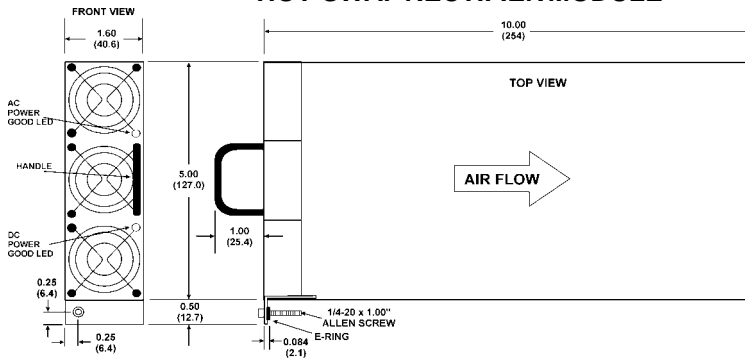
NOTE: 1. Voltage set at factory.

J4 SIGNAL CONNECTOR



Positronic SD25F0S500X
with FC7520D pins

HOT-SWAP RECTIFIER MODULE

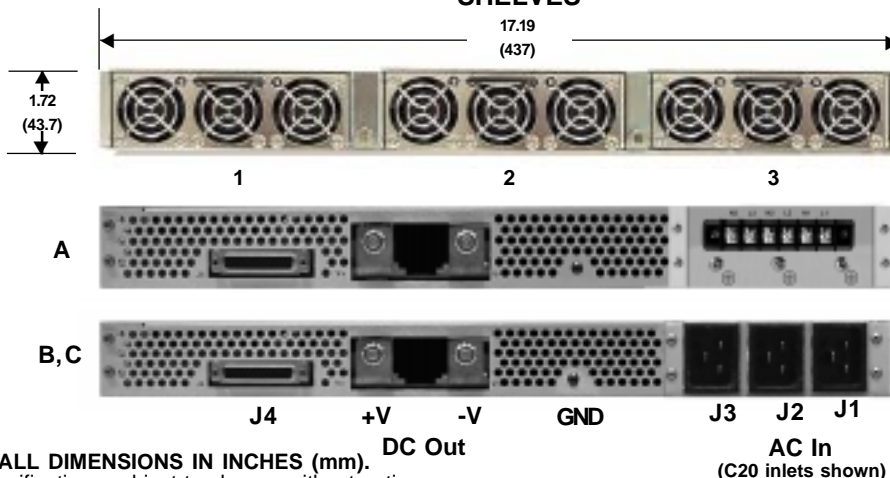


J4 PIN CONNECTIONS			
PIN	FUNCTION	PIN	FUNCTION
1	Inhibit	14	AC Power Good - 1
2	Overtemp. Warning - 1*	15	DC Power Good - 1*
3	Current Monitor - 1*	16	AC Power Good - 2
4	Overtemp. Warning - 2*	17	DC Power Good - 2*
5	Current Monitor - 2*	18	AC Power Good - 3
6	Overtemp. Warning - 3*	19	DC Power Good - 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	SCLK		

* These pins are open when I²C 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 and RPCM modules and three shelf models for the RPCP 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) rack 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 775-1451-0000 (set of two).

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

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