

# TRPI/TRRI/TRSI SERIES: BULK POWER FRONT ENDS

## Hot-Swap 2U, Up to 7500 Watts Output Power



### FEATURES

- 85% Efficiency
- Power Factor Correction to EN61000-3-2
- Up to 10.9W/In<sup>2</sup>Power Density
- Hot-Swap N+1 Redundant Operation
- 2U 19-inch Rack Mounting
- 10% Output Adjustment Range
- Low Cost
- 12V, 24V, 28V or 48V Output
- 1250, 2000 or 2500W Module Output Power
- Up to 7500W Total Power, Non-Redundant
- Up to 5000W Total Power, 2+1 Redundant
- Integral Isolation Diodes
- Output Current Limiting
- Inrush Current Limiting
- Remote Output Adjustment

### TWO-YEAR WARRANTY

### HOT-SWAP MODULE ORDERING GUIDE

Max. Watts	Output Voltage /Current	Adjustment Range	Input Voltage	Minimum Load	Line/Load Regulation	Model Number
1250*	12V 104.2A	10%	85VAC - 264VAC	0A	1%	TRPI3000
1250*	24V 52.1A	10%	85VAC - 264VAC	0A	1%	TRPI5000
1250*	28V 44.6A	10%	85VAC - 264VAC	0A	1%	TRPI6000
1250*	48V 26.0A	10%	85VAC - 264VAC	0A	1%	TRPI7000
2000	24V 83.3A	10%	170VAC - 264VAC	0A	1%	TRRI5000
2000	28V 71.4A	10%	170VAC - 264VAC	0A	1%	TRRI6000
2000	48V 41.7A	10%	170VAC - 264VAC	0A	1%	TRRI7000
2500	24V 104.2A	10%	170VAC - 264VAC	0A	1%	TRSI5000
2500	28V 89.3A	10%	170VAC - 264VAC	0A	1%	TRSI6000
2500	48V 52.1A	10%	170VAC - 264VAC	0A	1%	TRSI7000

\*NOTE: Below 90VAC input, derate output power by 10%. Full rated power at 90-264VAC.

The maximum rated power and maximum rated output current may not be exceeded for any voltage within the specified output voltage range.

### ORDERING GUIDE

The hot-swap modules and the mating rack-mount are separate items and must be ordered separately.

HOT-SWAP MODULES: Order quantity using model number from table.

SYSTEM RACK: Order RRS2U-19.

### MATING-CONNECTOR KIT

Order Kit No.  
775-1441-0000

### SAFETY CERTIFICATIONS

AGENCY	STANDARD
UL	UL1950
CUL	CSA22.2 No.950
DEMKO	EN60950

# TRPI/TRRI/TRSI MODULE SPECIFICATIONS

Typical at Nominal 230VAC Line, Full Load and 25°C Unless Otherwise Noted.

## OUTPUT SPECIFICATIONS

Total Output Power, Max	1250, 2000 or 2500 Watts
Voltage Adjustment Range	10%
Total Regulation <sup>1</sup>	1.0%
Ripple & Noise, Pk-Pk <sup>2</sup>	125mV, 12V Models
	250mV, 24V & 28V Models
	500mV, 48V Models
Holdup Time <sup>3</sup>	20ms
Dynamic Response <sup>4</sup>	1ms
Temperature Coefficient	0.05%/°C
Minimum Load	0A
Overload Protection	Constant Current Limiting
Overvoltage Protection	Latched Shutdown
Active Current Share <sup>5</sup>	10% Differential From Rated Current
Remote Sense	Up to 0.5V Per Wire

## INPUT SPECIFICATIONS

Input Voltage Range	See Model Table
Power Factor	0.98
Input Frequency	47-63Hz
Inrush Limiting	25A Peak
Input Current, Full Load, TRSI	13.1A@230VAC
	TRRI 10.4A@230VAC
	TRPI 12.5A@120VAC
Input EMI Filter, Conducted	EN55022 Curve B
	FCC20780 pt. 15J Curve B
Harmonic Distortion	EN61000-3-2
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)

Input Protection, Internal Fuse ..... 20A  
**GENERAL SPECIFICATIONS**

Efficiency	85% at Full Load
Switching Frequency	70kHz Nominal
Overtemperature Protection	Power Shutdown
Isolation, Class I <sup>6</sup> , min	3000VAC Input - Output
	1500VAC Input - Ground
	50VDC Output - Ground
Safety Standards	EN60950, UL60950, CSA22.2 No.60950

## ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	0°C to 70°C Ambient
Derating	2.5% / °C, 50°C to 70°C
Storage Temperature	-40°C to +85°C
Cooling	Integral Ball Bearing Fan

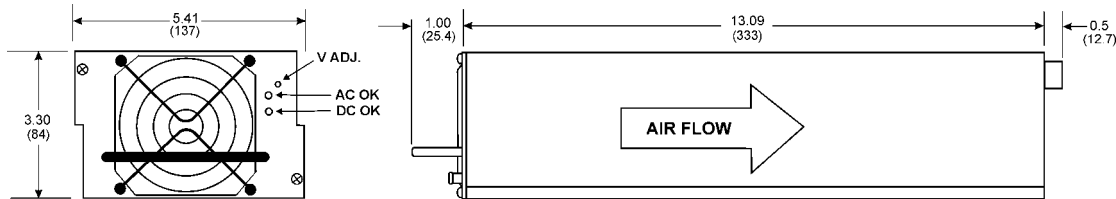
## PHYSICAL SPECIFICATIONS

Case Material, Module	Aluminum
Rack Mount	Steel
Finish, Rack Mount	Powder Coat Gray
Dimensions, Inches (mm)	
Hot-Swap Module	3.3H x 4.9W x 13.1D
	(84 x 124 x 333)
Rack Mount	3.50H x 17.20W x 19.88D
	(89 x 437 x 505)

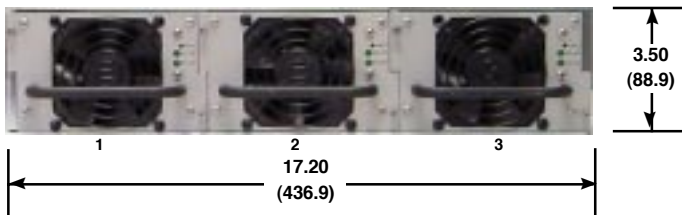
### NOTES:

- At remote sense point over full line range and 0-100% load change.
- 20MHz bandwidth. Measured with 0.1 F ceramic and 10 F tantalum capacitors in parallel across the output.
- Full output power at nominal AC line.
- <5% deviation recovering to within 1% for 50% load change.
- Using single wire current share with remote sense connected.
- Input - output isolation figure is for isolation components only. 100% production Hipot tested.

## HOT-SWAP MODULE



## 19" RACK-MOUNT



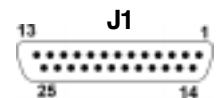
↑ AC CONNECTION AREA      ↑ J1 SIGNAL CONNECTOR      ↑ + DC OUTPUT BUS BARS      ↑ -

**ALL DIMENSIONS IN INCHES (mm).**

All specifications subject to change without notice.

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	N.C.
8	N.C.	21	N.C.
9	N.C.	22	N.C.
10	Current Share	23	-Sense
11	+ Sense	24	Remote Adjust-1
12	Remote Adjust-2	25	Remote Adjust-3
13	N.C.		

**NOTE:** AC Connections are made to a terminal block behind the rear grille. There is a separate connection to each module.



**AMP747846-4 Connector  
AMP747912-2 Mate**