



TRI-MAG, Inc.

® your POWER Specialists

1601 N. CLANCY CT. • VISALIA, CA 93291
(559) 651-2222 • FAX (559) 651-0188
<http://www.tri-mag.com>
<http://eemonline.com/tri-mag>
tri-mag@worldnet.att.net

HOT SWAP AND REDUNDANT SERIES

45-300 Watts For Industrial & Telecommunication



GENERAL SPECIFICATIONS

Line Input..... a) 90VAC to 132VAC
or 180VAC to 264VAC, 47Hz to 63Hz
b) -48VDC (DC48 model)
c) 24VDC (DC24 model)

Output Power..... See Specifications

Output Adjustable..... Main Output $\pm 10\%$

Efficiency..... 70% Typical

Holdup Time..... (115V) 20ms

Isolation..... 3750VAC

Operating Temperature..... 0 to 50°C

Storage Temperature..... - 20°C to 85°C

Temperature Coefficient..... 0/02% / C

Ripple Voltage..... See Specifications

Safety:
Designed in full compliance with..... UL 1950
CSA 22.2 #234
TUV IEC950 EN60950

DESCRIPTION

The latest technology and topology is used to design this series.

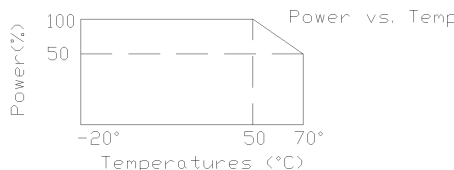
This technology efficiently delivers the maximum output of continuous power and lower minimum load requirements. This topology also assures very high reliability and performance.

FEATURES

- High Efficiency
- Low Cost
- Low Output Noise
- High Surge Output
- Overload Protection
- Short Circuit Protection
- 100% Hi-Pot Tested
- 100% Cycling On-Off Burn-In Test
- Built-In Line Filter FCC Class B and VDE Class B

APPLICATIONS

- Personal Computers
- Industrial Computers
- Telecommunications
- Process Control Equipment
- Instrumentation
- Robotics
- Workstations
- LAN Equipment
- Medical



POWER GOOD SIGNAL

Model UV	Dimension (L x W x H)	Mounting Hole
MFSP-087	5.375 x 3.0 x 1.35 (136.5 x 76.20 x 34.15)	4.551 x 2.551 (115.6 x 64.8)
TMG-R063	7 x 3.74 x 1.62 (177.8 x 98 x 41.15)	6.5 x 3.24 (165.1 x 82.29)
TMG-R083	7 x 3.74 x 1.62 (177.8 x 98 x 41.15)	6.5 x 3.24 (165.1 x 82.29)
TMG-R153	7.75 x 4.25 x 1.85 (196.85 x 107.95 x 47.0)	7.25 x 3.74 (184.15 x 95.0)
TMG-R230	4.81 x 0.59 x 1.61 (122.2 x 15 x 41)	Slide-in
ATX-R300	6.69 x 5.90 x 3.35 (170 x 150 x 85)	Slide-in
DC48-R300 DC48-300ATX	5.51 x 5.90 x 3.39 (140 x 150 x 86)	Slide-in
AT-R230RD	5.51 x 5.90 x 3.39 (140 x 150 x 86)	PS2 Mountable
ATX-R230RD	8.66 x 14.1 x 4.17 (220 x 358 x 106)	-
DC48-R300RD	8.26 x 6.73 x 7.91 (210 x 171 x 201)	-



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HOT SWAP AND REDUNDANT SERIES — OUTPUT SPECIFICATIONS

Model	Voltage (Vdc)	Load (A)			Tolerance ±	Ripple & Noise	Load/Line Regulation	Note
		Min.	Rate	Peak				
MFSP-047 45W	+5V +12V	1.0 0	3.0 2.5	6.0 3.0	5% 5%	50mV 120mV	±2% ±5%	Adjust @ +5.15V & +12.4V Fig 7
TMG-R063 60W	+5V +12V	0 0	3.5 4.0	5.0 11.0	5% 5%	50mV 120mV	±2% ±5%	Fig 1
TMG-R083 80W	+5V +12V	0 0	7.0/4.5 4.0/5.0	10.0/6.5 7.0/14.5	5% 5%	50mV 120mV	±2% ±5%	Fig 2
TMG-R153 150W	+5V +12V	0 0	6.0 10.0	8.0 20.0	5% 5%	50mV 120mV	±2% ±5%	Fig 3
TMG-R230 200W	+5V +12V -5V -12V	4.0 1.0 0.1 0.1	20.0 10.0 0.5 0.5	25.0 12.0 1.0 1.0	5% 5% 5% 5%	50mV 100mV 100mV 100mV	±4% ±5% ±2% ±2%	Fig 4
ATX-R300 300W	+3.3V +5V +12V -12V -5V	0 1.0 0 0 0	7.5 17.0 16.0 0.5 0.5	10.0 25.0 20.0 - -	5% 5% 5% 5% 5%	50mV 50mV 100mV 120mV 100mV	±3% ±3% ±5% ±5% ±5%	Fig 5 Total com- bined output power on 3.3v and 5V is 120 watts
AT-R230RD 200W	+5V +12V -5V -12V	4.0 1.0 0.1 0.1	20.0 10.0 0.5 0.5	25.0 12.0 1.0 1.0	5% 5% 5% 5%	50mV 100mV 100mV 120mV	±4% ±5% ±5% ±5%	Fig 9
AT-250RD 250W	+5V +12V -5V -12V	4.0 1.0 0.1 0.1	25.0 10.0 0.5 0.5	30.0 14.0 1.0 1.0	5% 5% 5% 5%	50mV 100mV 100mV 100mV	±4% ±5% ±5% ±5%	Fig 9
ATX-250RD 250W	+3.3V +5V +12V -5V -12V +5VBS	0 3.0 1.0 0 0 0	20.0 25.0 10.0 0.5 0.5 0.75	- 30.0 14.0 1.0 1.0 -	5% 5% 5% 5% 5%	50mV 50mV 100mV 100mV 120mV -	±5% ±5% ±5% ±10% ±10%	Fig 9
ATX-300RD 300W	+3.3V +5V +12V -5V -12V	0 1.0 0 0 0	7.5 17.0 16.0 0.5 0.5	10.0 25.0 20.0 - -	5% 5% 5% 5% 5%	50mV 50mV 100mV 100mV 100mV	±3% ±3% ±5% ±5% ±5%	Total com- bined output power on 3.3V and 5V is 120 watts



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TES, BM, ATX, DC48, DC24 SERIES— OUTPUT SPECIFICATIONS

Model	Voltage (Vdc)	Load (A)			Tolerance ±	Ripple & Noise	Load/Line Regulation	Note
		Min.	Rate	Peak				
DC48-2250RD 250W	+5V	3.0	25.0	30.0	5%	50mV	±4%	-48VDC Input Fig 8
	+12V	1.0	10.0	14.0	5%	100mV	±5%	
	-12V	0	0.5	1.0	10%	120mV	±5%	
	-5V	0	0.5	1.0	10%	100mV	±5%	
DC48-2250ATXRD 250W	+3.3V	0	15.0	20.0	5%	50mV	±4%	-48VDC Input Fig 8
	+5V	3.0	25.0	30.0	5%	50mV	±4%	
	+12V	1.0	10.0	14.0	5%	120mV	±5%	
	-5V	0	0.5	1.0	10%	100mV	±5%	
	-12V	0	0.5	1.0	10%	120mV	±5%	
+5VBS	-	0.75	-	-	-	-	-	
DC48-R300RD 300W	+5V	1.0	42.0	47.0	5%	50mV	±4%	-48VDC Input Fig 11
	+12V	1.0	6.0	12.0	5%	100mV	±5%	
	-12V	0.1	1.0	2.0	5%	120mV	±5%	
	-5V	0.1	1.0	2.0	5%	100mV	±5%	
DC48-R300ATXRD 300W	+3.3V	0	12.0	15.0	5%	50mV	±4%	-48VDC Input Fig 11
	+5V	1.0	42.0	47.0	5%	50mV	±4%	
	+12V	1.0	6.0	12.0	5%	100mV	±5%	
	-12V	0.1	1.0	2.0	5%	120mV	±5%	
	-5V	0.1	1.0	2.0	5%	120mV	±5%	
DC48-R300 300W	+5V	1.0	42.0	47.0	5%	50mV	±4%	-48VDC Input Fig 6
	+12V	1.0	6.0	12.0	5%	100mV	±5%	
	-5V	0.1	1.0	2.0	5%	120mV	±5%	
	-12V	0.1	1.0	2.0	5%	100mV	±5%	
DC48-R300ATX 300W	+3.3V	0	12.0	15.0	5%	50mV	±4%	-48VDC Input Fig 6
	+5V	1.0	42.0	47.0	5%	50mV	±4%	
	+12V	1.0	6.0	12.0	5%	100mV	±5%	
	-12V	0.1	1.0	2.0	5%	120mV	±5%	
	-5V	0.1	1.0	2.0	5%	120mV	±5%	

- a) All specifications and price subject to change without notice
- b) Contact factory for safety agency approved status



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TMG-R063 Fig. 1



TMG-R083 Fig. 2



TMG-R153 Fig. 3



TMG-R230 Fig. 4



ATX-R300 Fig. 5



DC48-R300ATX Fig. 6



MFSP-047 Fig. 7

Redundant System



DC48-2250RD
DC48-2250ATXRD
Fig 8



AT-R230RD
AT-250RD
ATX-250RD
Fig 9



ATX-R300RD
Fig 10



DC48-R300RD
DC48-R300ATXRD
Fig 11