



**TRI-MAG, Inc.**  
*your* POWER Specialists

1601 N. CLANCY CT. • VISALIA, CA 93291  
 (559) 651-2222 • FAX (559) 651-0188  
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# DZ150 SERIES

## 150 Watts with PFC

For Medical and Industrial Applications



### GENERAL SPECIFICATIONS

Input Voltage..... 90VAC to 264VAC  
 Input Frequency..... 47Hz to 63Hz  
 Power Factor..... >0.95  
 Inrush Current (cold)..... Less than 20A at  
 115VAC or 40A at 230VAC cold start, 25°C  
 Operating Temperature..... 0 to 70°C  
 De-rated 2.5%/°C >50°C  
 Storage Temperature..... -20°C to 85°C  
 Cooling..... Free Air Convection  
 Efficiency..... 79-88% Typical  
 Holdup Time..... >20ms  
 Overvoltage Type..... Latch off  
 Overload Protection..... Auto-recovery  
 Short Circuit Protection..... Auto-recovery  
 Earth Leakage..... 300µ Max @ 240VAC  
 Designed in full compliance with. UL 60950-1,  
 UL60601-1  
 CSA 22.2 #60950-1 No.601.1  
 EN60950-1, EN60601-1  
 EMI..... FCC "B", EN55022 "B", EN55011 "B"  
 Harmonics..... EN61000-3-2 class D  
 EMS..... EN61000-4-2, -3, -4, -5, -6, -8, -11

### DESCRIPTION

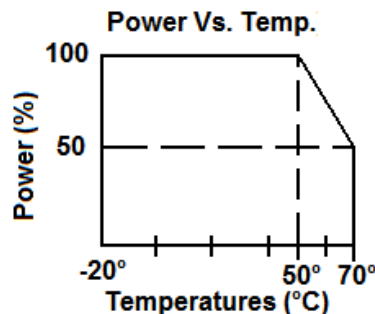
DZ150 series are 150W with active PFC in U shape chassis power supply. With soft-switching topology, low-profile height fits 1U constraints, high efficiency and high density in 4.0 W/in<sup>2</sup>. 220W peak rating for 8 seconds.

### FEATURES

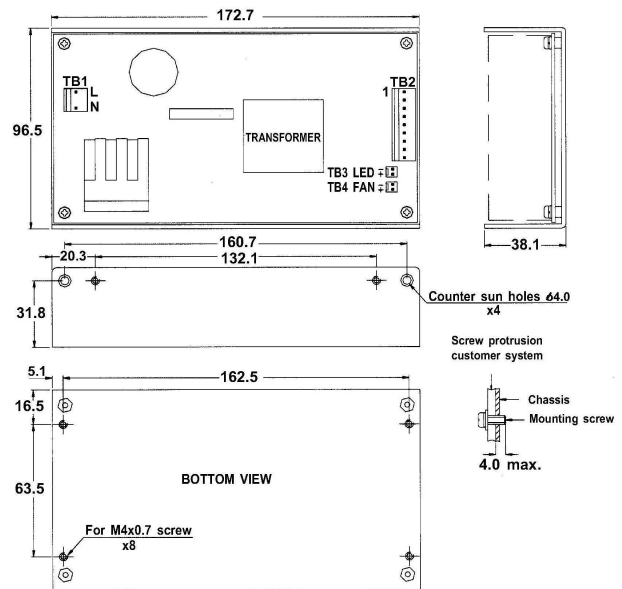
- EMI FCC Class B
- Power Factor Correction
- No Minimum Load Required (Single Outputs Only)
- Single and Multiple Output
- Universal input 90VAC to 264VAC

### APPLICATIONS

- Computer Peripherals
- Telecommunications
- Tape Drives
- Test Instrumentation Product
- Data Acquisition
- Medical



### MECHANICAL SPECIFICATIONS



1. Dimension shown in mm as above.
2. Size: 3.8" X 6.8" X 1.5"  
[96.5mm X 172.7mm X 38.1mm]
3. Connectors: AC Input: Molex 5277-02A or equivalent  
DC Output: Molex 5277-12A for Quad output 5277-10A for other  
Fan: Molex 5045-02A or equivalent  
Remote Sense: Molex 5045-02A or equivalent



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### OUTPUT SPECIFICATIONS

Model	Watts	Voltage (Vdc)	Load (A)			Tolerance ±	Ripple & Noise	Regulation	
			Min.	Rate	Peak			Line	Load
DZ150-1EU DZ150-1EC	150	+5V +12V -12V	0 0 0	10 7 0.5	20 15 -	1% 5% 5%	50 mV 120 mV 120 mV	± 1% ± 1% ± 1%	± 1% ± 5% ± 5%
DZ150-19EU DZ150-19EC	150	+3.3V +5V +12V -12V	0 0 0 0	10 8 3.5 0.5	15 10 - -	3% 2% 5% 5%	50 mV 50 mV 120 mV 120 mV	± 1% ± 1% ± 1% ± 1%	± 3% ± 3% ± 5% ± 5%
DZ150-12EU DZ150-12EC	150	+5V +12V	0 0	10 7	20 15	1% 5%	50 mV 120 mV	± 1% ± 1%	± 1% ± 1%
DZ150-6EU DZ150-6EC	150	+5V	0	28	-	1%	50 mV	± 1%	± 1%
DZ150-7EU DZ150-7EC	150	+12V +5V	0 0	12 2	18 -	1% 2%	120 mV 50 mV	± 1% ± 1%	± 1% ± 1%
DZ150-7EU-1 DZ150-7EC-1	150	+12V	0	12.5	18	1%	120 mV	± 1%	± 1%
DZ150-8EU DZ150-8EC	150	+15V +5V	0 0	9.6 2	14 -	5%	200 mV	± 1%	± 1%
DZ150-8EU-1 DZ150-8EC-1	150	+15V	0	10	14	1%	150 mV	± 1%	± 1%
DZ150-9EU DZ150-9EC	150	+24V +5V	0 0	6 2	8.8 -	1% 2%	200 mV 50 mV	± 1% ± 1%	± 1% ± 1%
DZ150-9EU-1 DZ150-9EC-1	150	+24V	0	6.5	8.8	1%	240 mV	± 1%	± 1%
DZ150-14EU DZ150-14EC	150	+48V	0	3.2	4.6	1%	480 mV	± 1%	± 1%
DZ150-11EU DZ150-11EC	150	+5V +24V +12V -12V	0 0 0 0	8 3 2 0.5	18 7 - -	2% 5% 5% 5%	50 mV 240 mV 120 mV 120 mV	± 1% ± 1% ± 1% ± 1%	± 3% ± 3% ± 5% ± 5%



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**DZ150 SERIES 150WATT— PIN ASSIGNMENT**

Pin Model	1	2	3	4	5	6	7	8	9	10	11	12
DZ150-1EU/EC	-12V	+5V	+5V	+5V	COM	COM	COM	COM	COM	+12V	+12V	+12V
DZ150-19EU/EC	+12V	-12V	+3.3V	+3.3V	+3.3V	COM	COM	COM	COM	COM	+5V	+5V
DZ150-12EU/EC	N/C	+5V	+5V	+5V	COM	COM	COM	COM	COM	+12V	+12V	+12V
DZ150-6EU/EC	+5V	+5V	+5V	+5V	+5V	+5V	COM	COM	COM	COM	COM	COM
DZ150-7EU/EC	+5V	COM	COM	COM	COM	+12V	+12V	+12V	+12V			
DZ150-7EU/EC-1	N/C	COM	COM	COM	COM	+12V	+12V	+12V	+12V			
DZ150-8EU/EC	+5V	COM	COM	COM	COM	+15V	+15V	+15V	+15V			
DZ150-8EU/EC-1	N/C	COM	COM	COM	COM	+15V	+15V	+15V	+15V			
DZ150-9EU/EC	+5V	COM	COM	COM	COM	+24V	+24V	+24V	+24V			
DZ150-9EU/EC-1	N/C	COM	COM	COM	COM	+24V	+24V	+24V	+24V			
DZ150-14EU/EC	N/C	COM	COM	COM	COM	+48V	+48V	+48V	+48V			
DZ150-11EU/EC	+12V	-12V	+5V	+5V	+5V	COM	COM	COM	COM	COM	COM	+24V

NOTE: Enclosed (EC) is available

**Note:** Contact factory for Safety Agency Approved status.

1. Each output can provide up to peak load temporarily. Continuous staying in more than rated load is not allowed.
2. At factory, in 60% rated load condition, each output is checked to be within voltage accuracy.
3. Line regulation is defined by changing  $\pm 10\%$  of input voltage from nominal line at rated load.
4. Load regulation is defined by changing  $\pm 40\%$  of measured output load from 60% rated load.
5. The ripple and noise is measured by using 15MHz bandwidth limited oscilloscope and terminated each output with a 0.47  $\mu\text{F}$  capacitor at rated load and nominal line.
6. Hold up time is measured from the end of the last charging pulse to the time which the main output drops down to 95% output voltage at rated load and nominal line.
7. Efficiency is measured at rated and nominal load.

**OTHER POWER SUPPLIES FOR MEDICAL APPLICATIONS**

1. Desktop Style
  - A. DT430M-5 (30 Watts, +12VDC)
  - B. DT450M-6 (50 Watts, +24VDC)
2. "U" shape and Enclosed
  - A. DZ200M-9EU or EC  
 200 Watts, 24V convection cooled 250 Watts with 18 CFM forces air  
 dimension: 4.2" x 8.0" x 1/5" (106.7mm x 203.2mm x 38.1mm)
  - B. UV480PM-4  
 80 Watts, +5V @ 12.0A and +12V @ 1.0A  
 dimension: 3.3" x 5.25" x 1.5" (83.82mm x 133.35mm x 38.1mm)
3. Detailed Specification is available