TLP150 Medical Series Single output

Total Power: 150 W **Input Voltage:** 85 - 264 VAC **# of Outputs:** Single



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Special Features

- 150 W on main channel with only 200 LFM
- Low profile fits 1U applications
- Active PFC and EN61000-3-2 compliant
- Integrated control and monitoring features
- Overcurrent, overvoltage and overtemperature protection
- Compliance to EN55022-B conducted noise standard
- 12 V fan output
- 5 V standby output (optional)
- RoHS compliant
- 2 year warranty

Safety

- VDE EN60601-1/IEC60601-1
- UL2601-1/CSA22.2
- No. 601-1

Electrical Specifications

Input		
Input voltage range:	Universal Input	85 - 264 Vac
Input frequency range:		47-63 Hz
Input surge current:	264 Vac (cold start)	40 A max.
Safety ground leakage current:	264 Vac, 50 Hz	150 μΑ
Input current:	120 Vac @ 150 W 230 Vac @ 150 W	1.8 A rms 0.8 A rms
Input fuse:	UL/IEC127	T 3.15 A, 250 Vac
Output		
Adjustment Range:		± 10%
Total regulation (line and load):	Main output Auxiliary outputs Fan output	± 3% ± 5% ± 10%
Turn-on delay:	@120 Vac Input	2.0 s max.
Transient response:	Main output 25% to 75% step at 0.5 A/μs	5% max. dev., 1 ms max. recovery to 1%
Temperature coefficient:		± 0.02%/°C
Overvoltage protection:	Main outputs	25%, ± 5%
Short circuit protection:	Current limited	Continuous
Minimum output current:	Singles	0 A
Fan voltage output:	See Note 9	12 V @ 0.5 A





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EMC Characteristics (5)		
Conducted emissions:	EN55022, FCC part 15	Level B
Harmonic current correction:	EN61000-3-2	Compliant
ESD air:	EN61000-4-2	Level 3
ESD contact:	EN61000-4-2	Level 3
Radiated immunity:	EN61000-4-3	Level 3
Fast transients:	EN61000-4-4	Level 4
Surge:	EN61000-4-5	Level 4
Conducted immunity:	EN61000-4-6	Level 3
General Specifications		
Hold-up time:	850 Vac @ 60 Hz	20 ms @ 150 W
Efficiency:	115 Vac @ 150 W 230 Vac @ 150 W	81% typ. 84% typ.
Isolation voltage:	Input/output Input/chassis	4000 Vac 1500 Vac
Weight:	260g (9.2 oz)	
MTBF (@ 25 °C):	Telcordia SR-332 MIL-HDBK-217F	900,000 hours min. 350,000 hours min.

Environmental Specifications

Thermal performance:	Operating ambient, (See derating curve)	0° C to +70 °C
	Non-operating	-40 °C to +85 °C
	0 °C to 50 °C ambient, 200 LFM forced air	150 W
	0 °C to 50 °C ambient, convection cooled	100 W
	50 °C to 70 °C ambient, convection cooled	Derate linearly to 50% load
Relative humidity:	Non-condensing	5 - 95% RH
Altitude:	Operating	10,000 feet max.
	Non-operating	30,000 feet max.
Vibration (See Note 7):	5 - 500 Hz	2.4 G rms peak
Shock:	per MIL-STD-810E	516.4 Part IV

60 C

70 C

50 C

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Ordering Inforn	nation					
Output Current		Dinala	Tatal Danulatian	Madal Niveshava		
Output Voltage	Min	Max (free air)(1,4)	Max (forced air)(2,4)	Ripple	Total Regulation	Model Numbers
12 V	0 A	8.4 A	12.5A	120 mV	± 3.0%	TLP150N-99S12J
24 V	0 A	4.2A	6.3 A	240 mV	± 3.0%	TLP150N-99S24J

Notes

- 1 Free air convection. Maximum continuous output power not to exceed 100 W. Refer to Figure 1 for the derating curve.
- 2 200 LFM forced air cooling from the ac input side. Maximum continuous output power not to exceed 150 W.
- 3 Figure is peak-to-peak for room temperature rating. Output noise measurements are made across a 20 MHz bandwidth using a 6 inch twisted pair, terminated with a 10 μF tantalum capacitor and a 0.1 μF ceramic capacitor.
- 4 CAUTION: Allow a minimum of 1 second after disconnecting line power when making thermal measurements. For optimum reliability no part of the heatsink should exceed 115 °C and no semi-conductor case temperature should exceed 120 °C.
- 5 No external filtering required during conducted emissions testing but some applications may require additional filtering to achieve system compliance. Compliance with radiated EMI specifications may require mounting in a suitable enclosure.
- 6 This product is only for inclusion by professional installers within other equipment and must not be operated as a stand alone product.
- 7 Three orthogonal axes, random vibration 10 minutes for each axes, 2.4 G.
- 8 Replace the 'J' at the end of the model number with 'FJ' when the optional standby output and/or remote ON/OFF control is required e.g. TLP150N-99S12FJ.
- 9 12 V (fan) present when main output is present. An optional 5 Vsb (standby) output is available whenever ac input is present, regardless of remote ON/OFF signal status.
- 10 The 'J' suffix indicates that these parts are Pb-free (RoHS 6/6) compliant. TSE RoHS 5/6 (non Pb-free) compliant versions may be available on special request, please contact your local sales representative for details.
- 11 NOTICE: Some models do not support all options. Please contact your local Emerson representative or use the on-line model number search tool at http://www.PowerConversion.com to find a suitable alternative..

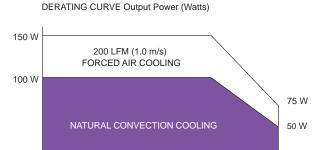
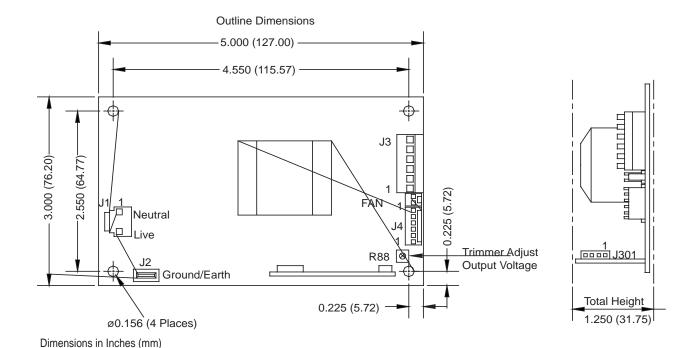


Figure 1: Derating Curve

30 C

40 C

20 C



0 W

0 C

10 C

Figure 2: Mechanical Drawing

Connector and Mating Connector Types Mating Connector Type Connector Type Molex 09-65-2038 (5273 series) Molex 09-52-4034 (5239 series) or equivalent with [1 void pin 2 or equivalent Molex 08-52-0072 (2478 series) or equivalent crimp terminals Molex 09-65-2068 (5273 series) Molex 09-52-4064 (5239 series) or equivalent with [3 or equivalent Molex 08-52-0072 (2478 series) or equivalent crimp terminals Leoco 2421P04H000 (2421 series) Leoco 2420S04000 (2420 series) or equivalent with Leoco 2453TPH00V1 (2453T series) or equivalent crimp or equivalent terminals [301 (Optional) ОГ JST EHR-4 (EH series) or equivalent with JST SEH-001T-P0.6 (EH series) or equivalent crimp terminals Molex 22-01-3027 (2695 series) or equivalent with Molex 22-23-2021(6373 series) Fan or equivalent Molex 08-50-0113 (2759 series) or equivalent crimp terminals Rev.7.8.09_140 TLP150 Medical Series

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J1 Pin Connections Pin 1 Neutral Pin 3 Live

J2 Tab Connections		
Tan	Ground/Earth	

J3 Pin Connections			
RTN	Main Return		
RTN	Main Return		
RTN	Main Return		
Vo	+Main Output		
Vo	+Main Output		
Vo	+Main Output		
	RTN RTN RTN Vo Vo		

J4 Pin Connections			
Pin 1	-S	-Vo Remote Sense	
Pin 2	DC OK	DC Power Good Signal	
Pin 3	PW OK	Power Good	
Pin 4	LS	Load Share Signal	
Pin 5	+S	+Vo Remote Sense	
Pin 6	SGND	Signal Common	

J301 Pin Connections (Optional)			
Pin 1	5 Vsb	Standby Voltage	
Pin 2	SGND	Signal Common	
Pin 3	Reserved	Do Not Connect	
Pin 4	PS OFF	Remote ON/OFF Signal	

Fan Pin Connections			
Pin 1	+12 V	Fan Voltage	
Pin 2	+SGND	Return	