

TLP150 Medical Series

Single output

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



Rev.7.8.09_140
TLP150 Medical Series
1 of 4



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 μ A
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:		$\pm 10\%$
Total regulation (line and load):	Main output Auxiliary outputs Fan output	$\pm 3\%$ $\pm 5\%$ $\pm 10\%$
Turn-on delay:	@120 Vac Input	2.0 s max.
Transient response:	Main output 25% to 75% step at 0.5 A/ μ s	5% max. dev., 1 ms max. recovery to 1%
Temperature coefficient:		$\pm 0.02\%/^{\circ}\text{C}$
Overvoltage protection:	Main outputs	25%, $\pm 5\%$
Short circuit protection:	Current limited	Continuous
Minimum output current:	Singles	0 A
Fan voltage output:	See Note 9	12 V @ 0.5 A



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

Ordering Information						
Output Voltage	Output Current			Ripple	Total Regulation	Model Numbers
	Min	Max (free air) ^(1,4)	Max (forced air) ^(2,4)			
12 V	0 A	8.4 A	12.5 A	120 mV	± 3.0%	TLP150N-99S12J
24 V	0 A	4.2 A	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 μ F tantalum capacitor and a 0.1 μ F 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..

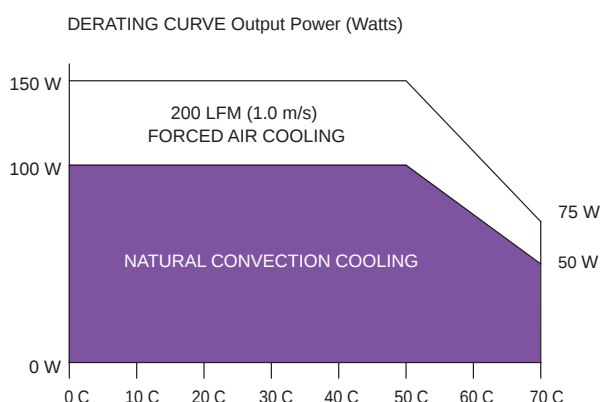


Figure 1: Derating Curve

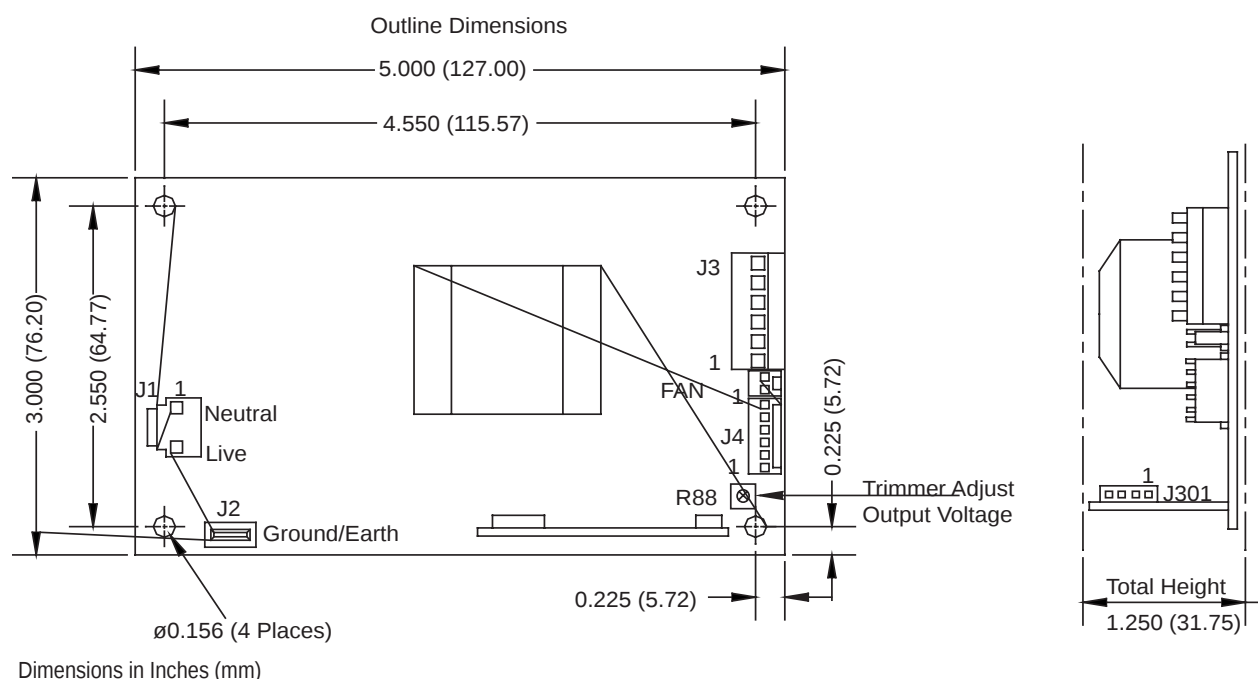


Figure 2: Mechanical Drawing

Connector and Mating Connector Types

Connector	Type	Mating Connector Type
J1	Molex 09-65-2038 (5273 series) void pin 2 or equivalent	Molex 09-52-4034 (5239 series) or equivalent with Molex 08-52-0072 (2478 series) or equivalent crimp terminals
J3	Molex 09-65-2068 (5273 series) or equivalent	Molex 09-52-4064 (5239 series) or equivalent with Molex 08-52-0072 (2478 series) or equivalent crimp terminals
J301 (Optional)	Leoco 2421P04H000 (2421 series) or equivalent	Leoco 2420S04000 (2420 series) or equivalent with Leoco 2453TPH00V1 (2453T series) or equivalent crimp terminals or JST EHR-4 (EH series) or equivalent with JST SEH-001T-P0.6 (EH series) or equivalent crimp terminals
Fan	Molex 22-23-2021(6373 series) or equivalent	Molex 22-01-3027 (2695 series) or equivalent with Molex 08-50-0113 (2759 series) or equivalent crimp terminals

J1 Pin Connections

Pin 1	Neutral
Pin 3	Live

J2 Tab Connections

Tan	Ground/Earth
-----	--------------

J3 Pin Connections

Pin 1	RTN	Main Return
Pin 2	RTN	Main Return
Pin 3	RTN	Main Return
Pin 4	Vo	+Main Output
Pin 5	Vo	+Main Output
Pin 6	Vo	+Main Output

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

Americas

5810 Van Allen Way
Carlsbad, CA 92008
USA
Telephone: +1 760 930 4600
Facsimile: +1 760 930 0698

Europe (UK)

Waterfront Business Park
Merry Hill, Dudley
West Midlands, DY5 1LX
United Kingdom
Telephone: +44 (0) 1384 842 211
Facsimile: +44 (0) 1384 843 355

Asia (HK)

14/F, Lu Plaza
2 Wing Yip Street
Kwun Tong, Kowloon
Hong Kong
Telephone: +852 2176 3333
Facsimile: +852 2176 3888

For global contact, visit:

www.PowerConversion.com
techsupport.embeddedpower@emerson.com

While every precaution has been taken to ensure accuracy and completeness in this literature, Emerson Network Power assumes no responsibility, and disclaims all liability for damages resulting from use of this information or for any errors or omissions.

Emerson Network Power.

The global leader in enabling business-critical continuity.

- AC Power
- Connectivity
- DC Power
- Embedded Computing
- Embedded Power
- Monitoring
- Outside Plant
- Power Switching & Controls
- Precision Cooling
- Racks & Integrated Cabinets
- Services
- Surge Protection

EmersonNetworkPower.com

Emerson Network Power and the Emerson Network Power logo are trademarks and service marks of Emerson Electric Co.
©2009 Emerson Electric Co.



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

Телефон: 8 (812) 309 58 32 (многоканальный)

Факс: 8 (812) 320-02-42

Электронная почта: org@eplast1.ru

Адрес: 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.