



**500W single output, conduction/  
baseplate cooled power supply**

Features	Benefits
• Fanless	Longer field life and no fan noise
• Baseplate cooled	Conducts heat outside of the system
• Wide range ac input	Supports global use
• Diode ORing + share option	Increase system reliability
• 2 Year Warranty	Low cost of ownership



Input			
Input Voltage	90-265Vac	Input Frequency	47 - 63Hz (440Hz with reduced PFC - consult sales office)
Input Harmonics	EN61000-3-2 compliant	Power Factor	0.95 typical
Input Fuse	Fast acting (not user accessible)	Inrush Current	<40A at 25°C and 230Vac (cold start) (meets EN61000-3-3)
Earth Leakage Current	1.5mA at 23Vac (50Hz)		

QUICK SELECTOR - example configurations			Additional variants available, see "How to Create a Product Description"	
Output Voltage	Max Output Current	ORing diode?	Units with cover	
			Description	Order Code
12V	42A	Yes	CPFE500F-12-DL-C	T800097
		No	CPFE500F-12-NL-C	T800100
24V	18A	Yes	CPFE500F-24-DL-C	T800111
		No	CPFE500F-24-NL-C	T800122
28V	18A	Yes	CPFE500F-28-DL-C	T800133
		No	CPFE500F-28-NL-C	T800144
48V	10.5A	Yes	CPFE500F-48-DL-C	T800155
		No	CPFE500F-48-NL-C	T800166

### How To Create A Product Description

Output	Adjustment range	Maximum Current
12	9.6 - 14.4V	42A
24	22.4 - 33.6V	18A
28	22.4 - 33.6V	18A
48	38.4 - 57.6V	10.5A

<b>N</b>	No ORing diode
<b>D</b>	ORing diode included Note: reduces maximum output voltage by 1V

<b>C</b>	Protective coating applied
<b>-L</b>	Supplied with cover fitted
<b>-N</b>	Open frame

Confirm availability of created product with TDK-Lambda

Isolation			
Input to Output	4.24kVdc	Output to Earth	500Vdc
Input to Earth	2.12kVdc		

## Output Specification

Total Output Power	504W	Continuous. Do not exceed maximum output current in 'How to create a product description'
Turn on time	1.5s max	at 90Vac and 100% rated output power
Efficiency	85%	typical (at 75% load, without ORing diodes, 230Vac input)
Hold up	10ms	typical at 230Vac, 100% load
Ripple and Noise	<1%	pk-pk, using EIAJ test method & 20MHz bandwidth (1.5% below -10°C)
Voltage Setting Accuracy	±2%	at 50% load
Remote Sense	Yes	Max 0.5V total line drop
Minimum Load	No	
Total Regulation	<4%	Including Line (for 90-264Vac input change), Load (for 0-100% load change) and Temperature (0-50°C). The ORing diode option adds 1V to the load regulation specification.
Transient Response	<10%	of set voltage for 50% load change (in 50µs within the range 25-100% load)
Recovery	500µs	for recovery to 2% of set voltage
Over Voltage Protection	Yes	Latching, need to cycle ac to restart unit
Short Circuit Protection	Yes	Auto recovery after removal of short circuit
Over Temperature Protection	Yes	Latching, need to cycle ac to restart unit
Series Operation	Yes	
Parallel Operation	Yes	Single wire, current share, up to 6 units

## Global Signals

Remote on/off	Opto isolated, 2.5mA (10-14V) to enable power supply, less than 0.15mA (0.5V) to disable or fit supplied links to permanently enable (see handbook for details)
Standby supply	12V±2V / 20mA isolated supply, not affected by remote on/off.
Output good (ENA)	Open collector (10mA sink current). Low (on) when output is in regulation
ORing diode	(option) - Allows redundant connection of power supplies with no additional diodes required.

## Environment

Baseplate Temperature	-40°C to 85°C operational (12V version 80°C max), -40°C to 85°C storage (max 12 months).
Low Temp Startup	-40°C
Humidity	20 - 95% RH non condensing
Shock	±3 x 30g shocks in each plane, total 18 shocks 30g shock = 11ms (+/-0.5msec), half sine Conforms to EN60068-2-27, EN60068-2-47, IEC68-2-27, IEC68-2-47, JIS C0041-1987. Conforms to MIL-STD-810E/F, Method 516.5, Pro I, IV, VI
Vibration	Single axis 10 - 500 Hz at 2g (sweep and endurance at resonance) in all 3 planes Conforms to EN60068-2-6, IEC68-2-6 Conforms to MIL-STD-810E, Method 514.4, Pro I, Cat 1,9
Altitude	-200 to 2000 metres operational (-200 to 5000m storage/transportation)
Weights	With lid = 1.4kg, no lid = 1.2kg
Pollution	Degree 2, Material group IIIb

## Immunity EN61000-6-2:2005

				Criteria
Electrostatic Discharge	EN61000-4-2	Level 2	Air discharge level 3, Contact discharge level 2. Not applicable to units without cover fitted	A
Electromagnetic Field	EN61000-4-3	Level 3	12V/m	A
Fast / Burst Transient	EN61000-4-4	Level 3		A
Surge Immunity	EN61000-4-5	Level 4	Common mode - 4.4kVac, Differential - 2.2kVac	A
Conducted RF Immunity	EN61000-4-6	Level 3	12V	A
Power Frequency Magnetic Field	EN61000-4-8	Level 4	30A/m	A
Voltage Dips, Variations, Interruptions	EN61000-4-11	Class 3	Criteria B for 5 sec interruption and dips to 40% for 5 cycles.	A
Ring Wave	EN61000-4-12	Level 3	Common mode - 2.2kV, Differential - 1.1kV	A
Voltage Fluctuations	EN61000-4-14	Class 3		A

## Emissions EN61000-6-3:2007

Radiated Electric Field	EN55011, EN55022	(as per CISPR.11/22) Class B, FCC47 part 15 subpart B see application note for details.
Conducted Emissions	EN55011, EN55022 MIL STD 461E/462D CE102	(as per CISPR.11/22) Class B, FCC47 part 15 subpart B 115V and 220V
Conducted Harmonics	EN61000-3-2	Class A, Class C at full load
Flicker	EN61000-3-3	Compliant - $d_{max}$ <4% only

## Safety Approvals

IEC/EN 60950-1, UL60950-1 / CSA 22.2 No 60950-1

CE Mark (EN60950-1)

CB certificate and Report available on request

## Notes

File E135494

LV Directive 2006/95/EC

Please check with technical sales for status of approvals

## Outline & Connection Drawings

### Signals Connections

Housing - Molex 22-01-1102

Crimp - Molex 08 70 0064  
(or equivalents)

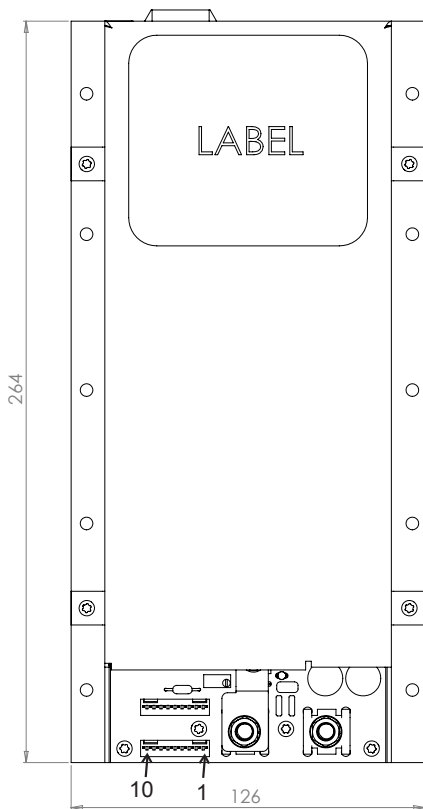
#### ac input connector

Housing Tyco 350766-4

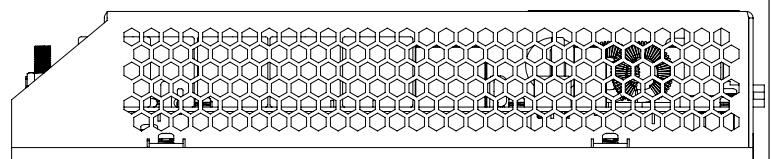
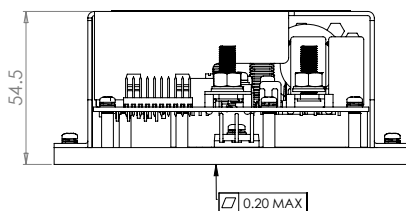
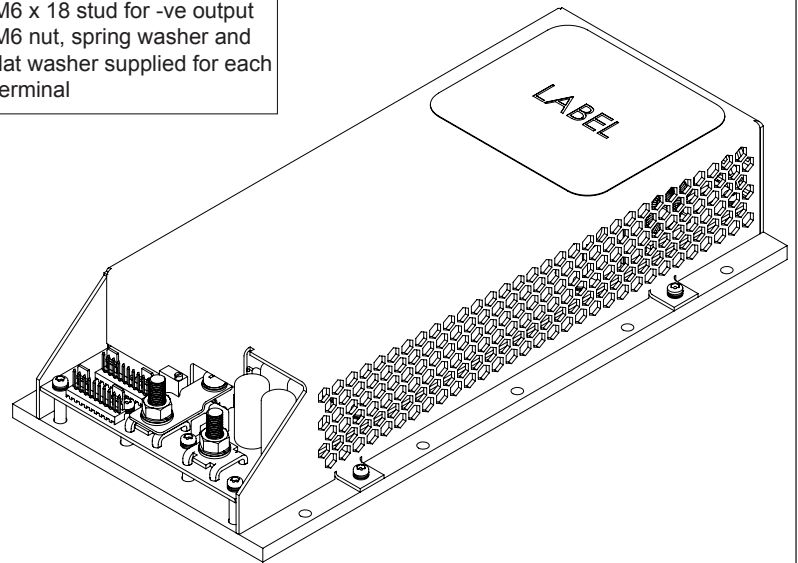
Crimp 926895-1 (3 off)  
or equivalent



Pin	Function
10	Do not connect
9	Output good - ENA
8	Trim
7	Current share
6	Aux
5	+remote on/off
4	-remote on/off
3	Aux common
2	- Sense
1	+ Sense



**dc output**  
M6 x 18 stud for +ve output  
M6 x 18 stud for -ve output  
M6 nut, spring washer and flat washer supplied for each terminal



Notes: 1. Customer fixings 10 x M4 clearance holes

2. All tolerances  $\pm 0.5\text{mm}$



## TDK-Lambda France SAS

ZAC des Delaches  
CS 41077  
9 rue Thuillere  
91978 Villebon Courtaboeuf  
France  
Tel: +33 1 60 12 71 65  
Fax: +33 1 60 12 71 66  
france@fr.tdk-lambda.com  
www.fr.tdk-lambda.com



## Italy Sales Office

Via dei Lavoratori 128/130  
20092 Cinisello Balsamo (MI)  
Italy  
Tel: +39 02 61 29 38 63  
Fax: +39 02 61 29 09 00  
info.italia@it.tdk-lambda.com  
www.it.tdk-lambda.com



## Netherlands

info@tdk-lambda.nl  
www.tdk-lambda.nl



## TDK-Lambda Germany GmbH

Karl-Bold-Strasse 40  
77855 Achern  
Germany  
Tel: +49 7841 666 0  
Fax: +49 7841 5000  
info.germany@de.tdk-lambda.com  
www.de.tdk-lambda.com



## Austria Sales Office

Aredstrasse 22  
2544 Leobersdorf  
Austria  
Tel: +43 2256 655 84  
Fax: +43 2256 645 12  
info.germany@de.tdk-lambda.com  
www.de.tdk-lambda.com



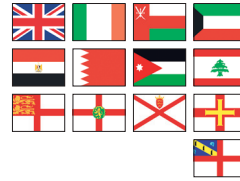
## Scandinavia Sales Office

Valdemarsgade 7  
4100 Ringsted  
Denmark  
Tel: +45 24 63 95 65  
Fax: +45 69 80 44 99  
info@de.tdk-lambda.com  
www.emea.tdk-lambda.com



## Switzerland Sales Office

Bahnhofstrasse 50  
8305 Dietlikon  
Switzerland  
Tel: +41 44 850 53 53  
Fax: +41 44 850 53 50  
info@de.tdk-lambda.com  
www.de.tdk-lambda.com



## TDK-Lambda UK Ltd.

Kingsley Avenue  
Ilfracombe  
Devon EX34 8ES  
United Kingdom  
Tel: +44 (0) 12 71 85 66 66  
Fax: +44 (0) 12 71 86 48 94  
powersolutions@uk.tdk-lambda.com  
www.uk.tdk-lambda.com



## TDK-Lambda Ltd.

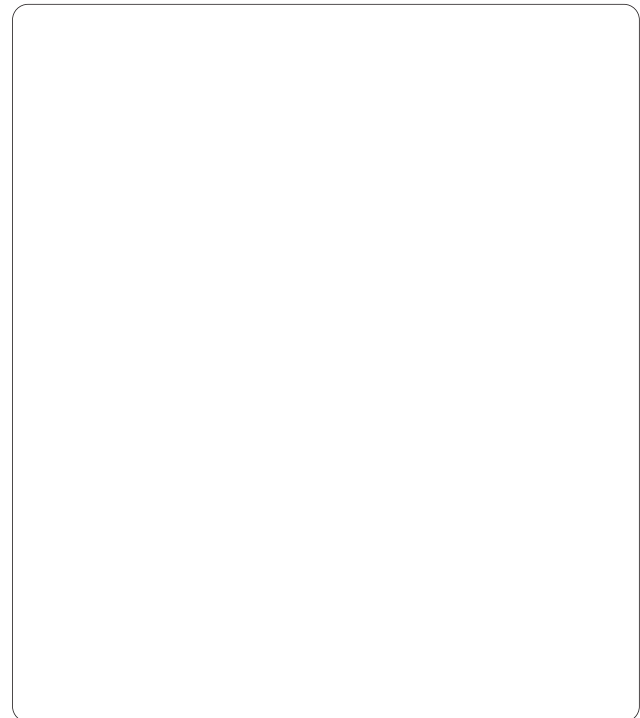
Kibbutz  
Givat Hashlosha 48800  
Israel  
Tel: +9 723 902 4333  
Fax: +9 723 902 4777  
info@tdk-lambda.co.il  
www.tdk-lambda.co.il



## C.I.S.

**Commercial Support:**  
Tel: +7 (495) 665 2627  
**Technical Support:**  
Tel: +7 (812) 658 0463  
info@tdk-lambda.ru  
www.tdk-lambda.ru

## Local Distribution





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](mailto:org@eplast1.ru)

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