



**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 |

N No ORing diode

D ORing diode included

D Note: reduces maximum output voltage by 1V

C Protective coating applied

-L Supplied with cover fitted

-N 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)

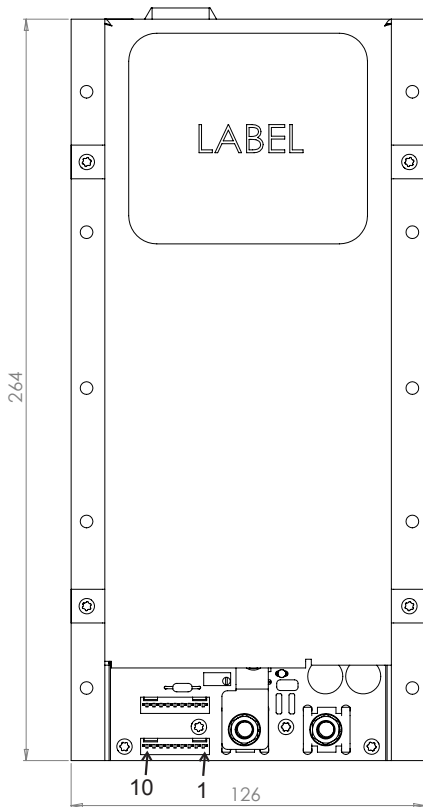
ac input connector

Housing Tyco 350766-4

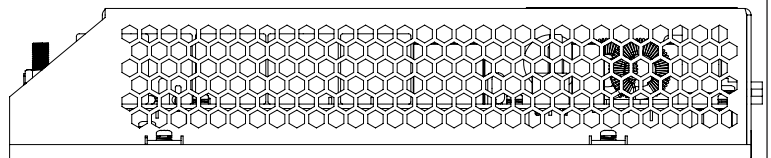
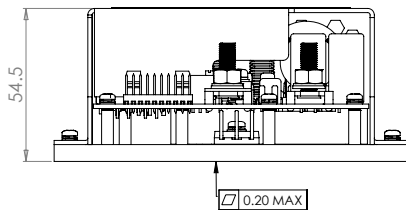
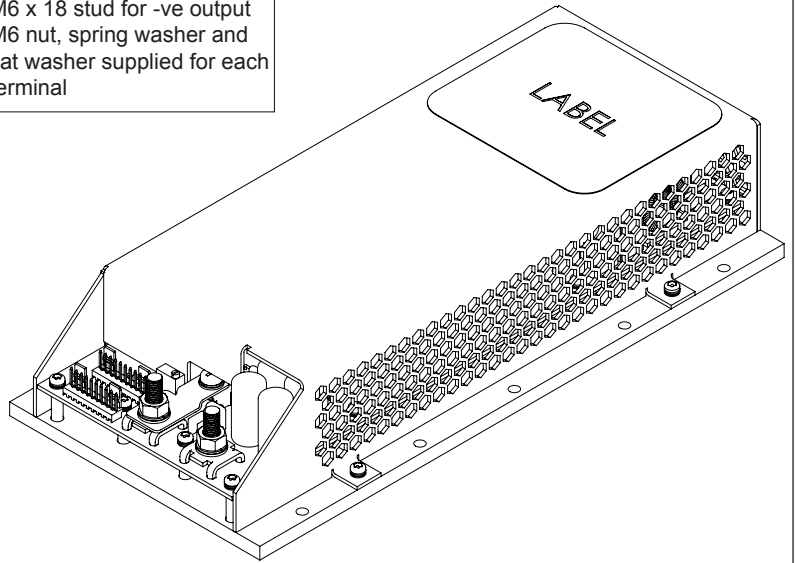
Crimp 926895-1 (3 off)
or equivalent



| 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



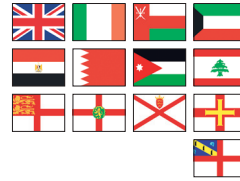
Scandinavia Sales Office

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.

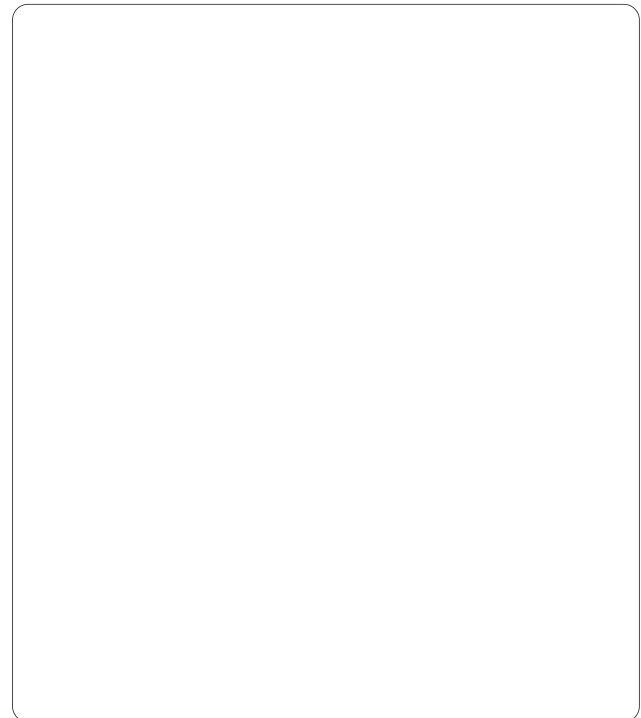
Kibbutz
Givat Hashlosha 48800
Israel
Tel: +9 723 902 4333
Fax: +9 723 902 4777
info@tdk-lambda.co.il
www.tdk-lambda.co.il



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

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