



CPFE500F

500 Watts, single output, AC-DC,
Conduction/Baseplate cooled power supply

- Universal Input
- Baseplate cooled
- No fan required
- High Efficiency
- Protective coating
- No minimum load
- 2 Year Warranty



Scan here for
product page

Key Market Segments & Applications

Outdoor Electronics
LED Signage
COTS
Rugged environments
Quiet/Silent Applications

Features and Benefits

Features

- Fanless
- Baseplate cooled
- Wide range ac input
- Diode ORing + share option

Benefits

- Longer field life and no fan noise
- Conducts heat outside of the system
- Supports global use
- Increases system reliability

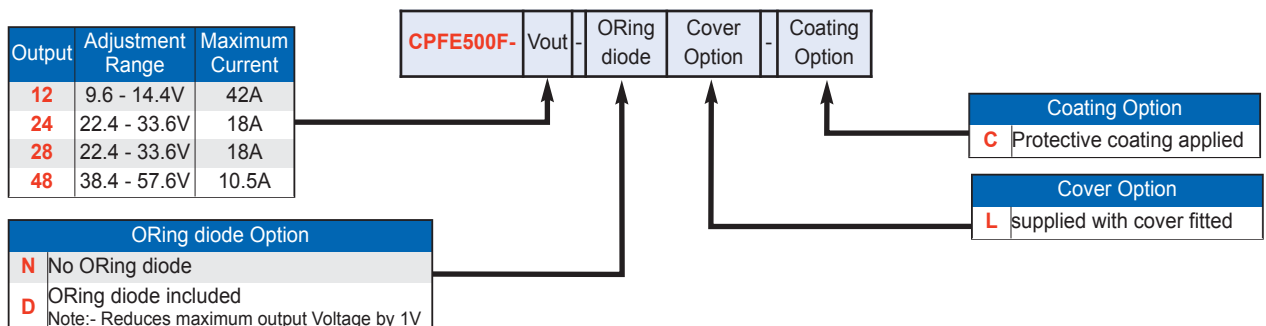
INPUT

Input Voltage	90 - 265Vac	Input Frequency	47 - 63Hz (440Hz with reduced PFC - consult factory)
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 230Vac (50Hz)		

QUICK SELECTOR (Standard models). Additional variants available - contact sales office

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



Confirm availability of created
product with the factory

ISOLATION				
Input to Output	Reinforced	4.24kV (dc)		
Input to Earth	Basic	2.12 kV (dc)	Output to Earth	500 Vdc

OUTPUT SPECIFICATION		
Output Power	504W	Continuous. Do not exceed maximum output current in 'How to Create a Product Description'.
Total Regulation	better than 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.
Ripple & Noise	1%	pk-pk, using EIAJ test method & 20MHz bandwidth (1.5% below -10°C)
Voltage Setting Accuracy	±2%	at 50% load
Turn on time	1.5s	at 90Vac and 100% of rated output power.
Efficiency	85%	typical (at 75% load, without ORing diode, 230Vac).
Hold up	10ms	typical at 230 Vac, 100% load
Min Load	None	
Transient Response	<10%	of set voltage for 50% load change (in 50µs within the range 25 - 100% load)
Recovery	<0.5ms	for recovery to 2% of set voltage
Short circuit protection	Yes	Auto recovery after removal of short circuit
Over Temperature protection	Yes	Latching, need to cycle ac to restart unit.
Over Voltage Protection	Yes	Latching, need to cycle ac to restart unit.
Series Operation	Yes	
Parallel Operation	Yes	Single wire, up to 6 units
Remote Sense	Yes	Compensates for up to 500mV cable drop.

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.

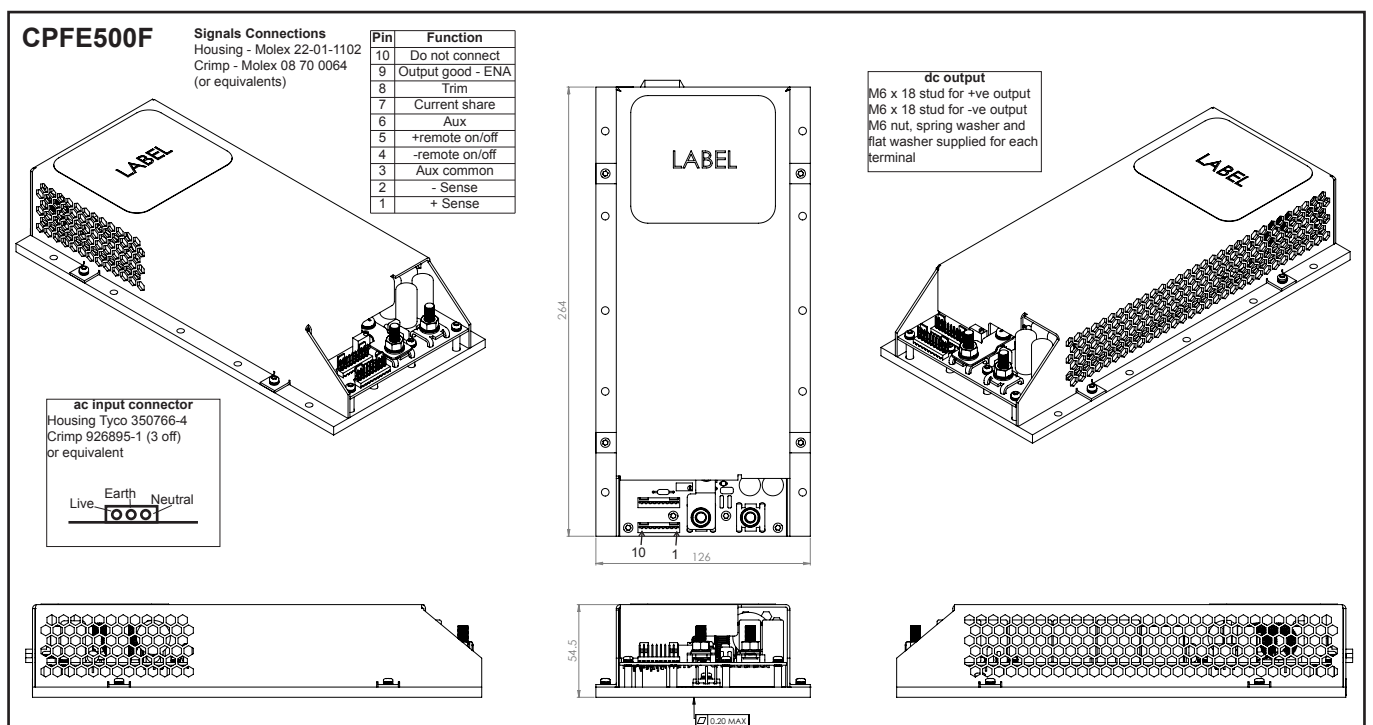
ENVIRONMENT	
Baseplate Temperature	-40°C to 85°C operational (12V version 80°C max), -40°C to 85°C storage (max 12 months). For horizontal mounting with ac input 90-149Vac, the maximum baseplate temperature is derated to 75°C (temperatures above 75°C are permitted when the cover is not fitted).
Low Temp 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

SAFETY APPROVALS					
	Edition / Date	Comments		Edition / Date	Amendments
EN 60950-1	Edition 2 - 2006		IEC 60950-1*	Edition 2 - 2005	
UL 60950-1	Edition 2 - 2007	File no E135494-A66	CSA 22.2 No 60950-1	Edition 2 - 2007	
CE Mark	LV Directive 2006/95/EC (EN60950-1)				
* CB certificate and Report available on request			Check with factory for status of approvals		

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 lid	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	as required by EN61000-6-2:2005	A/B
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	(as per CISPR.11/22) Class B, FCC47 part 15 subpart B	
	MIL STD 461E/462D CE102	115V and 220V	
Conducted Harmonics	EN61000-3-2	Class A, Class C at full load.	
Flicker	EN61000-3-3	Compliant - $d_{max} < 4\%$ only	

OUTLINE & CONNECTION DRAWINGS



TDK-LAMBDA EMEA

www.emea.tdk-lambda.com



TDK-Lambda France SAS

Route de Grivery
ZAC des Delaches
CS 41077
91978 Courtaboeuf Cedex
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



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



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



Nemic Lambda Ltd.

Kibbutz
Givat Hashlosa 48800
Israel
Tel: +9 723 902 4333
Fax: +9 723 902 4777
info@nemic.co.il
www.nemic.co.il



Russia

Technical Support:
St Petersburg
Tel: +7 (812) 6580463
Sales:
Moscow
Tel: +7 (499) 7557732
info@tdk-lambda.ru
www.tdk-lambda.ru

LOCAL DISTRIBUTION