

720-1000W Conduction Cooled Power Supplies

Features

- ◆ Smaller size than CPFE1000F
- ◆ Base plate cooled, no fan required
- ◆ Protective coating option
- ◆ I²C Interface



Key Market Segments & Applications



Specifications

Model		
AC Input	VAC	90 to 265VAC, 47-63Hz
Input Current (1)	A	13.6 / 6.6 (Model dependant)
Inrush Current (110 / 220VAC)	A	20 / 40 peak
Power Factor	-	0.95
Efficiency (typical) (2)	%	79 to 86% (Model dependant)
Output Voltage Setpoint Accuracy	-	±2% at 50% load
Line Regulation	mV	12V: 48mV, 28V: 56mV, 48V: 96mV
Load Regulation	mV	12V: 48mV, 28V: 56mV, 48V: 96mV
Ripple and Noise (20MHz BW) (3)	-	1% (2% below 0°C)
Over Current Protection	%	105 - 140% (Automatic recovery)
Over Voltage Protection	-	125 - 145% (Automatic recovery)
Parallel Operation	-	Yes (Single wire)
Power On Signal (ENA)	-	Open collector (10mA sink current). Low (on) when output is present
Auxiliary Supply	-	10 - 14V, 20mA
Remote On/Off (Opto isolated)	-	High = On
Temperature Coefficient	°C	<0.02%/°C
Overtemperature	°C	Shuts down between 90 - 115°C (Auto recovery)
Hold Up Time (230VAC)	ms	20ms @ 25°C and warmer
Leakage Current (at 230VAC, 50Hz)	uA	< 1.5mA
Remote Sense	-	Yes, compensates up to 500mV cable drop
I ² C Interface	-	Provides manufacturing location, date, serial number, part number, unit revision, output voltage & current read back, base plate temperature, remote on/off, IOG, DC good and over temperature warning
Operating Temperature	°C	-40 to +70°C ambient, (See reverse side for derating) (85°C baseplate, maximum)
Storage Temperature	°C	-40 to +100°C
Humidity	-	Operating: 20 - 90%RH, Non operating 10 - 95%RH (Pcb assembly protective coated)
Cooling	-	Conduction cooled
Withstand Voltage	-	Input to Output 4242VDC, Input to Ground 2121VDC, Output to ground 500VDC
Vibration (non operating)	-	MIL-STD-810F, Method 514.5, Proc 1, Category 4, 10
Shock	-	MIL-STD-810F, Method 516.5, Proc. I, IV, VI
Safety Agency Approvals	-	UL60950-1, CSA 22.2 No 60950-1, EN60950-1 (Ed 2), CE Mark
Line Dip	-	Complies with SEMI F47 (200VAC line only)
Conducted & Radiated EMI	-	Conducted: EN55022/EN55011 Class B, Radiated: Class A
Immunity	-	IEC61000-4-2 (Contact Level 2, Air discharge Lvl 3), -3 (Lvl 3), -4(Lvl 3), -5 (Lvl 3), -6 (Lvl 3), -8 (Lvl 3), -11 (Class 3), -12 (Lvl 3), -14 (Class 3)
Weight (Typ)	g	1240g (without cover)
Size (L x W x H)	mm	254 x 112 x 44mm (262mm including AC connector)
Warranty	yrs	2 years

(1) 110/220VAC

(2) 100% loading required.

(3) Warm up period of 30 minutes below -30°C for ripple. Jeita RC-9131C Method, see instruction manual for test methods.

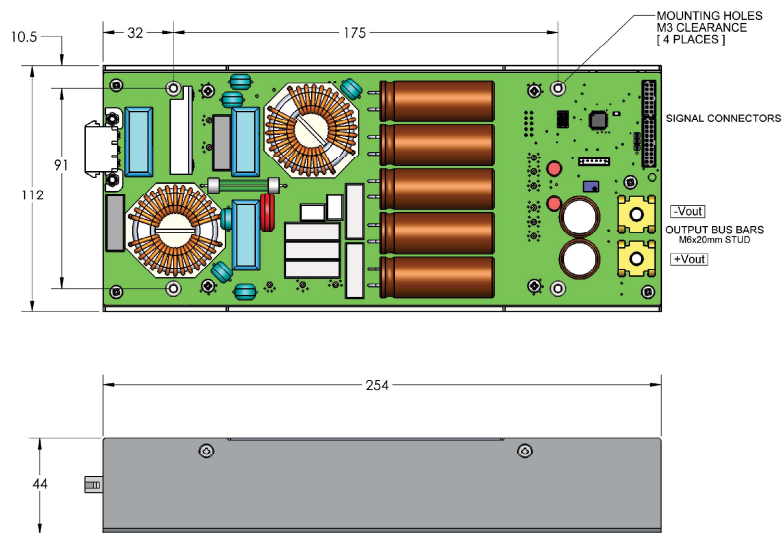
Model Selector

Model	Output Voltage (V)	Adjust Range (V)	Maximum Current	Efficiency (%) (110/220VAC)
CPFE1000FI-12	12	9.6 - 14.4	60	79 / 81
CPFE1000FI-28	28	22.4 - 33.6	36	83 / 86
CPFE1000FI-48	48	38.4 - 57.6	21	83 / 86

Derating (Ambient Temperature)⁽⁴⁾

Model	Input Voltage	Output Power (W)			
		45°C	50°C	60°C	70°C
CPFE1000FI-12	85VAC to 170VAC	720	720	720	720
	170VAC to 265VAC	720	720	720	720
CPFE1000FI-28	85VAC to 170VAC	1008	980	952	896
	170VAC to 265VAC	1008	1008	1008	1008
CPFE1000FI-48	85VAC to 170VAC	1008	1008	1008	1008
	170VAC to 265VAC	1008	1008	1008	1008

Outline Drawings



(4) Models mounted in the horizontal orientation. See instruction manual for alternative mounting positions and the corresponding derating guidelines.

Options

Suffix	Description
/C	Cover
/H	Pcb coating
/P	No U channel (pcb type)
Example:	CPFE1000FI-28/CH

For Additional Information, please visit
<https://product.tdk.com/info/en/products/power/index.html>



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