

720-1000W Conduction Cooled Power Supplies

Features

- ◆ Base plate cooled, no fan required
- ◆ High efficiency
- ◆ Protective coating
- ◆ MIL STD 461/462D CE102 EMC
- ◆ I²C Interface
- ◆ Wide range AC Input



Key Market Segments & Applications



Specifications

Model		
AC Input	-	90 to 265VAC, 47-63Hz (up to 440Hz) (3)
Input Current (1)	A	13.6 / 6.6 (Model dependant)
Inrush Current (115 / 230VAC)	A	20 / 40 peak
Power Factor	-	Meets EN61000-3-2
Efficiency (typical)	%	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)	-	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	-	<0.02%/°C
Overtemperature	°C	Shuts down between 90 - 115°C (Auto recovery)
Hold Up Time (230VAC)	ms	25ms
Leakage Current (@230VAC,50Hz)	mA	< 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 (Base plate)	-	12V: -40 to +85°C, 28V & 48V: -40 to +70 / 85°C (See reverse side for derating)(2)
Storage Temperature	°C	-40 to +100°C
Humidity	-	Operating: 20 - 90%RH, Non operating 10 - 95%RH (Pcb assembly protective coated)
Cooling	-	Conduction cooled through 6mm base plate
Withstand Voltage	-	Input to Output 4242VDC, Input to Ground 2121VDC, Output to ground 500VDC
Vibration (non operating)	-	MIL-STD-810F, Method 514.5, Figure 514.5C US (Category IV) and Figure 514.5C-15 (Category X)
Shock	-	MIL-STD-810E, 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	-	EN55022/EN55011 Class B, MIL STD 461/462D CE102
Immunity	-	IEC61000-4-2 (Contact Level 2, Air discharge Lvl 3), -3 (Lvl 3), -4(Lvl 3), -5 (Lvl 4), -6 (Lvl 3), -8 (Lvl 4), -11 (Class 3), -12 (Lvl 3), -14 (Class 3)
Weight (Typ)	g	2,400
Size (L x W x H)	mm	270 x 190 x 61mm
Warranty	yrs	2 years

(1) 100/200VAC

(2) CPFE1000F-28, -48: -40 to +70°C below 170VAC input voltage

(3) Reduced PFC above 63Hz. Contact technical support for 440Hz operation.

Model	Output Voltage (V)	Adjust Range (V)	Maximum Current	Efficiency (%) (110/220VAC)
CPFE1000F-12	12	9.6 - 14.4	60	79 / 81
CPFE1000F-28	28	22.4 - 33.6	36	83 / 86
CPFE1000F-48	48	38.4 - 57.6	21	83 / 86

Model	Input Voltage	Output Power (W)			
		50°C	60°C	70°C	85°C
CPFE1000F-12	85VAC to 170VAC	720	720	576	360
	170VAC to 265VAC	720	720	670	595
CPFE1000F-28	85VAC to 170VAC	1008	864	720	-
	170VAC to 265VAC	1008	1008	958	883
CPFE1000F-48	85VAC to 170VAC	1008	864	720	-
	170VAC to 265VAC	1008	1008	958	883

Technical drawing of the TDK-Lambda Model No. COPPE1000F power supply unit. The drawing includes a top view, a front view, and a side view.

Top View Dimensions:

- Overall Width: 270mm [10.63in]
- Overall Height: 190mm [7.48in]
- Top Mounting Holes: 2 x 260mm [10.24in], 2 x 210mm [8.27in], 2 x 154.500mm [6.08in], 2 x 107mm [4.21in], 2 x 57mm [2.24in]
- Bottom Mounting Holes: 6 x 179mm [7.05in], 6 x 5.500mm [0.22in]
- Output Bus Bars (+) ML Threaded Studs (2 PLACES)
- Output Bus Bars (-) ML Threaded Studs (2 PLACES)

Front View Dimensions:

- Overall Height: 190mm [7.48in]
- Overall Width: 61mm [2.40in]

Side View Dimensions:

- Overall Width: 270mm [10.63in]
- Overall Height: 61mm [2.40in]

Label:

TDK-Lambda
MODEL No. COPPE1000F

Customer Mounting Holes:

- 24.50mm THRU [0.18in] (12 PLACES)

