# **CPFE1000FI Series**

## 720-1000W Conduction Cooled Power Supplies

#### **Features**

- ◆ Smaller size than CPFE1000F
- ◆ Base plate cooled, no fan required
- ◆ Protective coating option
- ◆ I<sup>2</sup>C Interface



### **Key Market Segments & Applications**













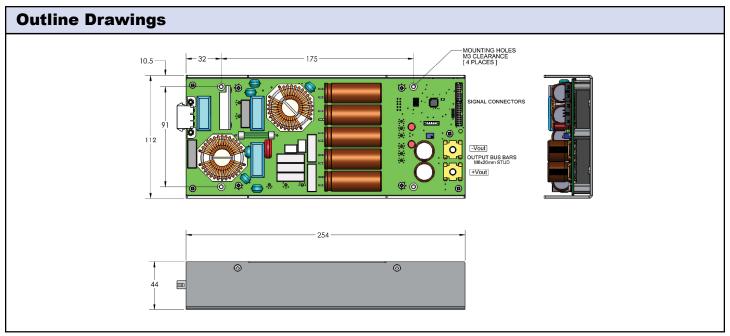
| Specifications                    |     |  |  |  |
|-----------------------------------|-----|--|--|--|
| Model                             |     |  |  |  |
| AC Input                          |     | 90 to 265VAC, 47-63Hz  |  |  |
| Input Current (1)                 | Α   | 13.6 / 6.6 (Model dependant)   |  |  |
| Inrush Current (110 / 220VAC)     |     | 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                   |     | 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 <sup>2</sup> 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  |  |  |
|                                   |     | Operating: 20 - 90%RH, Non operating 10 - 95%RH (Pcb assembly protective coated)   |  |  |
|                                   |     | Conduction cooled  |  |  |
| Withstand Voltage                 |     |  |  |  |
| 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.

# **CPFE1000FI Series**

| Model Selector |                       |                     |                    |                                |  |
|----------------|-----------------------|---------------------|--------------------|--------------------------------|--|
| Model          | Output<br>Voltage (V) | Adjust<br>Range (V) | Maximum<br>Current | Efficiency (%)<br>(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) <sup>(4)</sup> |                  |      |          |      |      |  |
|---|------------------|------|----------|------|------|--|
|   | Input            |      | Output P |      |      |  |
| Model   | Voltage          | 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 |  |



(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        |

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