

GPFC110 Commercial

110 Watt Global Performance Switchers

110 WATT GLOBAL PERFORMANCE SWITCHERS

FEATURES:

- **3.1 watts/cu.in. power density**
- **Compact size (6.3" x 3.75" x 1.62"; meets 1U height)**
- **Power factor corrected to IEC 1000-3-2 Class A**
- **Less than 300 µA leakage**
- **EMI compliance to CISPR 22, FCC Class B**
- **Approved to UL1950, IEC950 and CSA 22.2 No. 950**
- **2-year warranty**
- **CE marked to LVD**
- **RoHS Compliant Model Available (G suffix)**



SPECIFICATIONS

<p>Ac Input 90-264 Vac, 47-63 Hz single phase.</p>	<p>EMI/EMC Compliance All models include built-in EMI filtering to meet the EMC requirements below.</p>															
<p>Input Current Maximum input current 2.3 A at 90 Vac, 60 Hz with full rated load. Input current harmonic content meets the requirements of IEC1000-3-2.</p>	<table border="1"> <thead> <tr> <th>EMI SPECIFICATIONS</th> <th>COMPLIANCE LEVEL</th> </tr> </thead> <tbody> <tr> <td>Conducted Emissions</td> <td>EN55022 Class B; FCC Class B</td> </tr> <tr> <td>Static Discharge</td> <td>EN61000-4-2, 6 kV contact, 8 kV air</td> </tr> <tr> <td>RF Field Susceptibility</td> <td>EN61000-4-3, 3 V/meter</td> </tr> <tr> <td>Fast Transients/Bursts</td> <td>EN61000-4-4, 2 kV, 5 kHz</td> </tr> <tr> <td>Surge Susceptibility</td> <td>EN61000-4-5, 1 kV diff., 2 kV com.</td> </tr> <tr> <td>Line Frequency Harmonics</td> <td>EN61000-3-2 Class A</td> </tr> </tbody> </table>		EMI SPECIFICATIONS	COMPLIANCE LEVEL	Conducted Emissions	EN55022 Class B; FCC Class B	Static Discharge	EN61000-4-2, 6 kV contact, 8 kV air	RF Field Susceptibility	EN61000-4-3, 3 V/meter	Fast Transients/Bursts	EN61000-4-4, 2 kV, 5 kHz	Surge Susceptibility	EN61000-4-5, 1 kV diff., 2 kV com.	Line Frequency Harmonics	EN61000-3-2 Class A
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<p>Hold-up Time 25 ms minimum from loss of ac input at full load, nominal line (115 Vac).</p>	<p>Inrush Current Inrush 240 Vac is less than 37 A, averaged over the first ac half-cycle under cold start conditions. Limiting provided by internal thermistors.</p>															
<p>Output Power 110 W fan cooled, 75 W convection. Peak ratings are for 60 s maximum duration, 10% duty cycle.</p>	<p>Fan Output An additional output, same as Vout, suitable for powering a dc fan is included in all models. The output is protected by an internal resistor in the event of an overload.</p>															
<p>Total Regulation Total regulation is the maximum deviation from the nominal voltage for all steady-state loading conditions.</p>	<p>Power Fail TTL or CMOS compatible output goes low (<0.5 V) 8 ms before output voltage drops more than 4% below nominal voltage upon loss of ac power. The signal is factory set to trip when input power can no longer sustain the output.</p>															
<p>Overload Protection Fully protected against short circuit and output overload. Short circuit protection is cycling type power limit. Recovery after fault is automatic.</p>	<p>Temperature Coefficient 0.03%/°C typical on all outputs.</p>															
<p>Output Noise 0.5% rms, 1% pk-pk, 20 MHz Bandwidth, differential mode. Measured with noise probe directly across output terminals of the power supply.</p>	<p>Environmental Designed for 0 to 50°C operation at full rated output power; derate output current and total output power by 2.5% per °C above 50°C. See Environmental and Packaging Specifications on the next page.</p>															
<p>Transient Response 500 µs typical response time for return to within 0.5% of final value for a 50% load step change, $\Delta i/\Delta t < 0.2 \text{ A}/\mu\text{s}$. Maximum voltage deviation is 3.5%. Load must not go below stated minimum.</p>	<p>Commercial Safety Approvals All models are approved to UL1950, CSA22.2 No. 950-95, IEC950, EN60950. CB certificate available. Exceeds FCC and CISPR22 Class B conducted emissions requirement</p>															
<p>Remote Sense Provided as a standard feature. Capable of compensating for 0.25 V total of cabling losses in voltage. Open sense lead protection.</p>																
<p>Overvoltage Protection OVP crowbar reduces output voltage below nominal rating in less than 50 ms.</p>																
<p>Voltage Adjustment: Main output $\pm 5\%$.</p>																
<p>Input Protection Internal ac fuse provided on all models. Fuse does not blow on overload or short circuit—fuse blows only if catastrophic failure occurs in the unit.</p>																

Commercial Model	Output No.	Output	Output Minimum (A)	Output Maximum (A)	Output Maximum (B)	Total Regulation	OVP Setpoint	Notes
GPFC 110-5	1	5.1 v	0 A	11 A	15 A	2%	6.2 ± 0.6 V	C
GPFC 110-12	1	12 V	0 A	6.7 A	9.2 A	2%	14 ± 1.1 V	C
GPFC 110-15	1	15 V	0 A	5.3 A	7.3 A	2%	18.5 ± 1.5 V	C
GPFC 110-24	1	24 V	0 A	3.4 A	4.6 A	2%	28 ± 2.5 V	C
GPFC110-28	1	28 V	0 A	2.9 A	3.9 A	2%	34 ± 2.8 V	C
GPFC110-48	1	48 V	0 A	1.7 A	2.3 A	2%	55 ± 4 V	C

Notes:

A. With unrestricted convection cooling.

B. With 26cfm airflow.

C. Add "G" suffix to part number for RoHS compliant model.

GPFC110 MECHANICAL SPECIFICATIONS

- INPUT:**
- J1
 AMP P.C.B. HEADER/P/N 640445-5
 PIN 1) AC GROUND
 PIN 2) N/C
 PIN 3) AC NEUTRAL
 PIN 4) N/C
 PIN 5) AC LINE
 MATING CONNECTOR AMP P/N
 HOUSING 640250-5
 CONTACT 770476-1

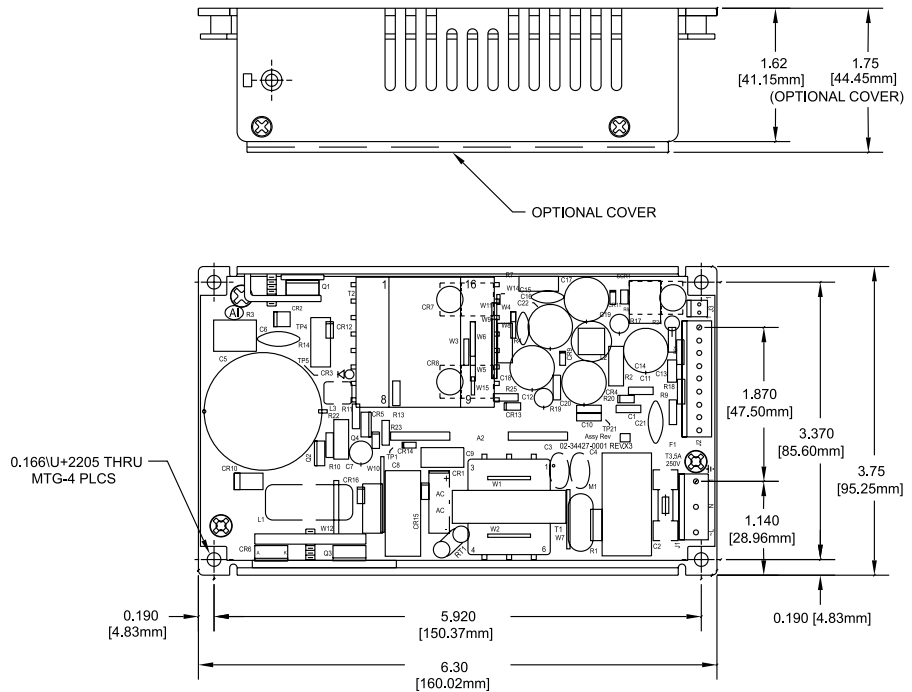
- OUTPUT:**
- J2
 AMP P.C.B. HEADER P/N 1-640445-9
 PINS 1-3) +Vout
 PIN 4) +SENSE
 PIN 5) -SENSE
 PIN 6-8) RETURN
 PIN 9) PWR FAIL
 MATING CONNECTOR AMP P/N
 HOUSING 640250-9
 CONTACT 770476-1

- FAN J3
 AMP P.C.B. HEADER P/N 640456-2
 MATING CONNECTOR P/N 640621-2
 PIN 1) -
 PIN 2) +

OPTIONAL COVER: 08-30466-2110
 5A MAXIMUM RECOMMENDED CURRENT PER
 CONNECTOR PIN.

WEIGHT: 1.9 LBS [0.86kg] MAX.

TOLERANCES: X.XX=0.030 [0.76mm]
 X.XXX=0.010 [0.25mm]



ENVIRONMENTAL SPECIFICATIONS	OPERATING	NON-OPERATING
Temperature (A)	See Individual Specs.	-40 to +85°C
Humidity (A)	0 to 95% RH	0 to 95% RH
Shock (B)	20 g _{pk}	40 g _{pk}
Altitude	-500 to 10,000 ft	-500 to 40,000 ft
Vibration (C)	1.5 g _{rms} 0.003 g ² /Hz	5 g _{rms} 0.026 g ² /Hz

- A. Units should be allowed to warm up/operate under non-condensing conditions before application of power.
- B. Shock testing—half-sinusoidal, 10 ± 3 ms duration, ± direction, 3 orthogonal axes, total 6 shocks.
- C. Random vibration—10 to 2000Hz, 6dB/octave roll-off from 350 to 2000Hz, 3 orthogonal axes. Tested for 10 min./axis operating and 1 hr./axis non-operating.