

# GPFC110 Commercial 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  $\mu$ A leakage
- EMI compliance to CISPR 22, FCC Class B
- Approved to UL1950, IEC950 and CSA 22.2 No. 950
- 2-year warranty
- marked to LVD

## SPECIFICATIONS:

### Ac Input

85-264 Vac, 47-63 Hz single phase.

### 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.

### Hold-up Time

25 ms minimum from loss of ac input at full load, nominal line (115 Vac).

### Output Power

Total regulation is the maximum deviation from the nominal voltage for all steady-state loading conditions. Each individual output is to be used within its specified limits of that output. Peak ratings are for 60 s maximum duration, 10% duty cycle.

### Overload Protection

Fully protected against short circuit and output overload. Short circuit protection is cycling type power limit. Recovery after fault is automatic.

### 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.

### Transient Response

500 ms typical response time for return to within 0.5% of final value for a 50% load step change,  $\Delta i/\Delta t < 0.2$  A/ms. Maximum voltage deviation is 3.5%. Load must not go below stated minimum.

### Remote Sense

Provided as a standard feature. Capable of compensating for 0.25 V total of cabling losses in voltage.

### Overvoltage Protection

OVP crowbar reduces output voltage below nominal rating in less than 50 ms.

### Voltage Adjustment

Main output  $\pm 5\%$ .

### 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.

### EMI/EMC Compliance

All models include built-in EMI filtering to meet the following emissions requirements:

EMI SPECIFICATIONS	COMPLIANCE LEVEL
Conducted Emissions	EN55022 Class B; FCC Class B
Static Discharge	EN61000-4-2, 6 kV contact, 8 kV ai
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

### 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.

### Fan Output

An additional output, same as  $V_{out}$ , 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.

### 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.

### Temperature Coefficient

0.03%/ $^{\circ}$ C typical on all outputs.

### Environmental

Designed for 0 to 50 $^{\circ}$ C operation at full rated output power; derate output current and total output power by 2.5% per  $^{\circ}$ C above 50 $^{\circ}$ C. See Environmental and Packaging Specifications on the next page.

### Commercial Safety

Approved to UL1950, CSA22.2 No. 234 Level 3, IEC950, EN60950 and CISPR22. UL file #E135803 commercial; CSA #LR46516. The output(s) are intended for safety earthed Signal Output and Intermediate Circuits only. All dc outputs are SELV under normal and single fault conditions.

# GPFC110 Commercial 110 Watt Single Output

Commercial Model	Output No.	Output	Output Minimum	Output Maximum (A)	Output Maximum (B)	Total Regulation	OVP Setpoint	Notes
GPFC110-5	1	5.1 V	0 A	11 A	15 A	2%	6.2 ± 0.6 V	C
GPFC110-12	1	12 V	0 A	6.7 A	9.2 A	2%	14 ± 1.1 V	C
GPFC110-15	1	15 V	0 A	5.3 A	7.3 A	2%	18.5 ± 1.5 V	C
GPFC110-24	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

A. With unrestricted convection cooling.

B. With 26cfm airflow.

C. Output current limited by primary power limit. Degree of output load on all outputs will affect maximum overload current.

## 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

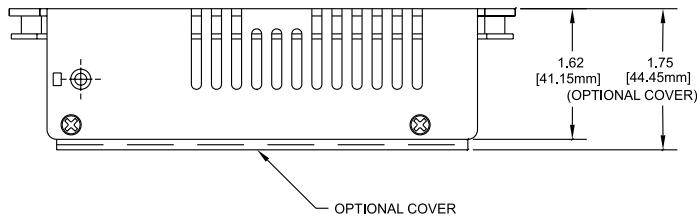
PIN 4) N/C

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

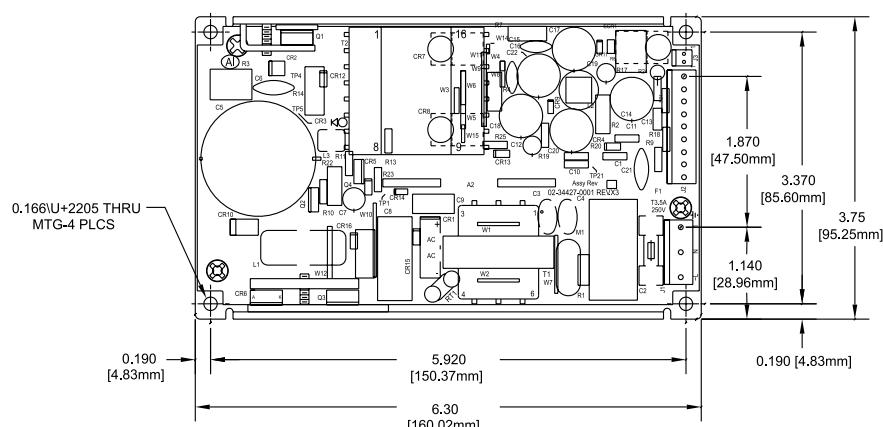
PIN 6-8) RETURN

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 Specification	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 <sub>pk</sub>	40 g <sub>pk</sub>
Altitude	-500 to 10,000 ft	-500 to 40,000 ft
Vibration (C)	1.5 g <sub>rms</sub> , 0.003 g <sup>2</sup> /Hz	5 g <sub>rms</sub> , 0.026 g <sup>2</sup> /Hz

- Units should be allowed to warm up/operate under non-condensing conditions before application of power.
- 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.
- Shock testing—half-sinusoidal, 10 ± 3 ms duration, ± direction, 3 orthogonal axes, total 6 shocks.