

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 μ A leakage
- EMI compliance to CISPR 22, FCC Class B
- Approved to UL1950, IEC950 and CSA 22.2 No. 950
- 2-year warranty
- $\text{C}\epsilon$ marked to LVD
- RoHS Compliant Model Available (G suffix)




SPECIFICATIONS

Ac Input 85-264 Vac, 47-63 Hz single phase.	EMI/EMC Compliance All models include built-in EMI filtering to meet the EMC requirements below.	
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.	EMI SPECIFICATIONS	COMPLIANCE LEVEL
Hold-up Time 25 ms minimum from loss of ac input at full load, nominal line (115 Vac).	Conducted Emissions	EN55022 Class B; FCC Class B
Output Power 110 W fan cooled, 75 W convection. Peak ratings are for 60 s maximum duration, 10% duty cycle.	Static Discharge	EN61000-4-2, 6 kV contact, 8 kV air
Total Regulation Total regulation is the maximum deviation from the nominal voltage for all steady-state loading conditions.	RF Field Susceptibility	EN61000-4-3, 3 V/meter
Overload Protection Fully protected against short circuit and output overload. Short circuit protection is cycling type power limit. Recovery after fault is automatic.	Fast Transients/Bursts	EN61000-4-4, 2 kV, 5 kHz
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.	Surge Susceptibility	EN61000-4-5, 1 kV diff., 2 kV com.
Transient Response 500 μs typical response time for return to within 0.5% of final value for a 50% load step change, $\Delta i/\Delta t < 0.2$ A/μs. Maximum voltage deviation is 3.5%. Load must not go below stated minimum.	Line Frequency Harmonics	EN61000-3-2 Class A
Remote Sense Provided as a standard feature. Capable of compensating for 0.25 V total of cabling losses in voltage. Open sense lead protection.	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.	
Overvoltage Protection OVP crowbar reduces output voltage below nominal rating in less than 50 ms.	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.	
Voltage Adjustment: Main output $\pm 5\%$.	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.	
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.	Temperature Coefficient 0.03%/°C typical on all outputs.	
	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.	
	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	

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]

The drawing shows the top and side views of the GPFC110 unit. The top view includes dimensions for the input connector (J1) at 0.190 [4.83mm], the main body width at 5.920 [150.37mm] and 6.30 [160.02mm], and the output connector (J2) at 1.140 [28.96mm] and 3.370 [85.60mm]. The side view shows the height at 1.62 [41.15mm] and 1.75 [44.45mm] for the optional cover, and 1.870 [47.50mm] and 3.75 [95.25mm] for the main unit. A label points to the 0.166U+2205 THRU MTG-4 PLCS.

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

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