

GPC80 GLOBAL PERFORMANCE SWITCHERS



SPECIFICATIONS:

AC Input

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

Input Current

Maximum input current at 120Vac, 60Hz with full rated output load: 2.3A

Hold-Up Time

20mSec minimum from loss of AC input at full load, nominal line (115Vac).

Output Power

80W continuous, 110W with air flow. Peak ratings are for 60 sec. maximum duration, 10% duty cycle. During peak load condition, output regulation may exceed total regulation limits.

Overload Protection

Fully protected against short circuit and output overload. Short circuit protection is cycling type power limit on outputs 1 & 2; foldback type on outputs 3 & 4. Recovery after fault is automatic. See output ratings chart for additional notes or conditions.

Overvoltage Protection

Main outputs: $124\% \pm 12\%$ typical.

Efficiency

70% at full rated load, nominal input voltage, depending on model and load distribution.

Turn-on Time

Less than 1 second at 120Vac, 25°C (inversely proportional to input voltage and thermistor temperature).

Input Protection

Internal AC fuse provided. Designed to blow only if a catastrophic failure occurs in the unit.

Inrush Current

Inrush is limited by internal thermistors. Inrush at 240Vac under cold start conditions will not exceed 34A.

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 (p. 11) for additional information.

Power Fail (optional)

TTL- or CMOS-compatible output goes low ($< 0.5V$) 5mSec before output voltage drops more than 4% below nominal voltage upon loss of AC power. The signal is factory set to trip on 84 to 94VAC brown-out depending upon incoming line impedance and distortion. Other settings are available to the user through adjustment of built-in potentiometer (consult factory for assistance).

FEATURES:

- Wide-range AC input 85-264VAC
- 2-year warranty
- Approved to UL1950, IEC950, EN60950 and CSA22.2-234 L3
- Exceeds FCC and CISPR22 Class B conducted emissions requirements
- Single and multiple outputs
- For medical version, see p. 90
- **CE** marked to LVD

No-Load Turn-on/Standby

No degradation of reliability will occur.

Output Noise

0.5% RMS, 1% Pk-Pk, 20MHz bandwidth, differential mode. Measured with noise probe directly across output terminals of the power supply.

Transient Response

Main output—500µSec typical response time for return to within 0.5% of final value for a 50% load step change. $\Delta I/\Delta t < 0.2A/\mu Sec$. Maximum voltage deviation is 3.5%. Startup/shutdown overshoot less than 3%.

Remote Sense

Provided as a standard feature on single-output models.

Voltage Adjustment

Built-in potentiometer adjusts voltage $\pm 5\%$ on outputs 1 & 2.

Reverse Voltage Protection

All outputs protected against inadvertent application of reverse voltage up to 1 times rated current of the reverse output.

Overload Protection

Factory set to begin power limiting at 120W.

EMI/EMC Compliance

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

EMI SPECIFICATIONS

Conducted Emissions

Static Discharge

RF Field Susceptibility

Fast Transients/Bursts

Surge Susceptibility

COMPLIANCE LEVEL

EN55022 Class B; FCC Class B

EN61000-4-2, 6 kV contact, 8 kV air

EN61000-4-3, 3 V/meter

EN61000-4-4, 2 kV, 5 kHz

EN61000-4-5, 1 kV diff., 2 kV com.

Leakage Current

0.7mA. 254Vac @ 60Hz input (with no deviations).

Safety

Approved to UL1950, CSA22.2 No. 234 Level 3, IEC950 and EN60950. UL file #E135803 commercial; CSA #LR46516 all. 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.

Model	Output No.	Output	Output Minimum	Output Maximum (B)	Output Maximum (C)	Output Peak	Noise P-P	Total Regulation (A)
GPC80A	1	+5V	1.0A	12A	12A	16A	50mV	2%
	2	+12V	0A	3A	4A	5A	120mV	2%
	3	-12V	0A	1A	1.2A	1.2A	120mV	3%
	4	+12V	0A	1A	1.2A	1.2A	120mV	3%
GPC80B	1	+5V	1.0A	12A	12A	16A	50mV	2%
	2	+12V	0A	3A	4A	5A	120mV	2%
	3	-12V	0A	1A	1.2A	1.2A	120mV	3%
	4	-5V	0A	1A	1.2A	1.2A	50mV	3%
GPC80C	1	+5V	1A	12A	12A	16A	50mV	2%
	2	+12V	0A	3A	4A	5A	120mV	2%
	3	-15V	0A	1A	1.2A	1.2A	150mV	3%
	4	+15V	0A	1A	1.2A	1.2A	150mV	3%
GPC80D	1	+5V	1A	12A	12A	16A	50mV	2%
	2	+24V	0A	2A	3A	4A	240mV	2%
	3	-12V	0A	1A	1.2A	1.2A	120mV	3%
	4	+12V	0A	1A	1.2A	1.2A	120mV	3%
GPC80E	1	+5V	1A	12A	12A	16A	50mV	2%
	2	+24V	0A	2A	3A	4A	240mV	2%
	3	-15V	0A	1A	1.2A	1.2A	150mV	3%
	4	+15V	0A	1A	1.2A	1.2A	150mV	3%
GPC80P	1	+5V	1A	12A	12A	16A	50mV	2%
	2	+24V	0.5A	3.5A	4.5A	4.5A	400mV	+10%/-5% (D)
	3	-12V	0A	1A	1.2A	1.2A	120mV	3%
	4	+12V	0A	2A	2A	2.5A	120mV	3%
GPC80-5	1	5V	0A	16A	20A	22A	50mV	2%
GPC80-12	1	12V	0A	6.7A	9.2A	9.2A	120mV	2%
GPC80-15	1	15V	0A	5.3A	7.3A	7.3A	150mV	2%
GPC80-24	1	24V	0A	3.4A	4.6A	4.6A	240mV	2%
GPC80-28	1	28V	0A	2.9A	3.9A	3.9A	280mV	2%
GPC80-48	1	48V	0A	1.7A	2.3A	2.3A	480mV	2%

A. Total regulation is defined as the maximum deviation from the nominal voltage for all steady-state conditions of initial voltage setting, input line voltage and output load.

B. Ratings for unrestricted natural convection cooling; output 1 & 2 combined load not to exceed 14A continuous; total power = 80W.

C. Ratings with 26cfm forced air cooling; output 1 & 2 combined load not to exceed 16A continuous; total power = 110W.

D. To maintain these regulation conditions, the +5V current must be at least 1/4 of V2 and not greater than 5 times the V2 current. Requires +5V to be adjusted within $\pm 1\%$ with at least a 1A load to maintain regulation on this input.

GPC80 MECHANICAL SPECIFICATIONS:

INPUT: J1

AMP P/N 640445-5 0.156 [3.96mm] CTR HEADER

PIN 1) AC GROUND
PIN 2) N/C
PIN 3) AC NEUTRAL
PIN 4) N/C
PIN 5) AC LINE

MATING CONNECTORS AMP P/N

HOUSING

INPUT 640250-5 770522-1
OUTPUT 1-640445-3 770522-1

NOTE: 5A MAXIMUM RECOMMENDED CURRENT PER CONNECTOR PIN

OPTIONAL ENCLOSURE AVAILABLE, ORDER P/N 08-30466-1180

WEIGHT: 1.8 LBS MAX. [0.82 kg MAX.]

OUTPUT: J2

AMP P/N 1-640445-3 0.156 [3.96mm] CTR HEADER

J2	MULTI OUTPUT MODELS	SINGLE OUTPUT MODELS	J2 CONT.	MULTI OUTPUT MODELS	SINGLE OUTPUT MODELS
PIN 1)	OUTPUT #1	OUTPUT #1	PIN 8)	OUTPUT #2	COMMON
PIN 2)	OUTPUT #1	OUTPUT #1	PIN 9)	OUTPUT #2	COMMON
PIN 3)	OUTPUT #1	OUTPUT #1	PIN 10)	POWER FAIL	POWER FAIL
PIN 4)	COMMON	OUTPUT #1	PIN 11)	OUTPUT #3	+ SENSE
PIN 5)	COMMON	COMMON	PIN 12)	KEY	KEY
PIN 6)	COMMON	COMMON	PIN 13)	OUTPUT #4	- SENSE
PIN 7)	COMMON	COMMON			

TOLERANCES:

X.XX = ± 0.030 (0.76MM)

X.XXX = ± 0.010 (0.25MM)

