GPC80 Commercial/GPM80 Medical

80 Watt Global Single and Multiple Output Performance Switchers

PERFORMANCE MEDICAL SWITCHERS

FEATURES:

- **Wide-range ac input 85-264 Vac**
- **2-year warranty**
- **Conducted EMI exceeds FCC Class B and CISPR 22 Class B (Commercial models) and CISPR 11 Class B (Medical models)**
- **Commercial Approved to UL1950, IEC950, EN60950 and CSA22.2-234 L3**
- **Medical Approved to UL2601-1, IEC601-1 and CSA22.2 No. 601.1**
- **Complies with EN61000-3-2 Class A**
- **RoHS Compliant Model Available (G suffix)**

SPECIFICATIONS

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

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

Hold-Up Time
20 ms minimum from loss of ac input at full load, nominal line (115 Vac).

Output Power
80 W continuous, 110 W with air flow. Peak ratings are for 60 s 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. Factory set to begin power limiting at 120 W. See output ratings chart for additional notes or conditions.

Overvoltage Protection
Main outputs: 124% ± 12% typical.

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

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 240 Vac under cold start conditions will not exceed 34 A.

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 next page.

Power Fail (optional)
TTL- or CMOS-compatible output goes low (< 0.5 V) 5 ms 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 94 Vac 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). For Power fail option, add -PF after model number.

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
Main output—500 µs typical response time for return to within 0.5% of final value for a 50% load step change. Δi/Δt<0.2 A/µs. 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 ±5% on outputs 1 & 2.

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

EMI SPECIFICATIONS	COMPLIANCE LEVEL
Conducted Emissions GPC80	EN55022 Class B; FCC Class B
Conducted Emissions GPM80	EN55011Class 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

Commercial Leakage Current
0.7 mA 254 Vac @ 60 Hz input.

Commercial 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.

Medical Leakage Current
35 µA 254 Vac @ 60 Hz input.

Medical Commercial Safety
Approved to UL2601-1, CSA-C22.2 No. 601.1 Level 3 and IEC601.1. UL file E116994; CSA #LR46516. The output(s) are intended for safety earthed Signal Output and Intermediate Circuits only. The output(s) are not acceptable for patient connection without additional isolation. All dc outputs are SELV under normal and single fault conditions.

All specifications are typical at nominal input, full load at 25°C unless otherwise stated

Commercial Model	Medical Model	RoHS Suffix*	Output No.	Output	Output Minimum	Output Maximum (B)	Output Maximum (C)	Output Peak	Noise P-P	Total Regulation (A)
GPC80A	GPM80A	G	1 2 3 4	+5 V +12 V -12 V +12 V	1.0 A 0 A 0 A 0 A	12 A 3 A 1 A 1 A	12 A 4 A 1.2 A 1.2 A	16 A 5 A 1.2 A 1.2 A	50 mV 120 mV 120 mV 120 mV	2% 2% 3% 3%
GPC80B	GPM80B	G	1 2 3 4	+5 V +12 V -12 V -5 V	1.0 A 0 A 0 A 0 A	12 A 3 A 1 A 1 A	12 A 4 A 1.2 A 1.2 A	16 A 5 A 1.2 A 1.2 A	50 mV 120 mV 120 mV 50 mV	2% 2% 3% 3%
GPC80C	GPM80C	G	1 2 3 4	+5 V +12 V -15 V +15 V	1 A 0 A 0 A 0 A	12 A 3 A 1 A 1 A	12 A 4 A 1.2 A 1.2 A	16 A 5 A 1.2 A 1.2 A	50 mV 120 mV 150 mV 150 mV	2% 2% 3% 3%
GPC80D	GPM80D	G	1 2 3 4	+5 V +24 V -12 V +12 V	1 A 0 A 0 A 0 A	12 A 2 A 1 A 1 A	12 A 3 A 1.2 A 1.2 A	16 A 4 A 1.2 A 1.2 A	50 mV 240 mV 120 mV 120 mV	2% 2% 3% 3%
GPC80 E	GPM80E	G	1 2 3 4	+5 V +24 V -15 V +15 V	1 A 0 A 0 A 0 A	12 A 2 A 1 A 1 A	12 A 3 A 1.2 A 1.2 A	16 A 4 A 1.2 A 1.2 A	50 mV 240 mV 150 mV 150 mV	2% 2% 3% 3%
GPC80P	GPM80P	G	1 2 3 4	+5 V +24 V -12 V +12 V	1 A 0.5 A 0 A 0 A	12 A 3.5 A 1 A 2 A	12 A 4.5 A 1.2 A 2 A	16 A 4.5 A 1.2 A 2.5 A	50 mV 400 mV 120 mV 120 mV	2% +10%/-5% D 3% 3%
GPC80-5	GPM80-5	G	1	5 V	0 A	16 A	20 A	22 A	50 mV	2%
GPC80-12	GPM80-12	G	1	12 V	0 A	6.7 A	9.2 A	9.2 A	120 mV	2%
GPC80-15	GPM80-15	G	1	15 V	0 A	5.3 A	7.3 A	7.3 A	150 mV	2%
GPC80-24	GPM80-24	G	1	24 V	0 A	3.4 A	4.6 A	4.6 A	240 mV	2%
GPC80-28	GPM80-28	G	1	28 V	0 A	2.9 A	3.9 A	3.9 A	280 mV	2%
GPC80-48	GPM80-48	G	1	48 V	0 A	1.7 A	2.3 A	2.3 A	480 mV	2%

* Add "G" suffix to part number for RoHS compliant model. Contact factory for availability.

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 26 cfm 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 ±1% with at least a 1A load to maintain regulation on this input.

E. For Power Fail option, add -PF after the model number.

GPC80/GPM80 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	CONTACT
INPUT	640250-5	770476-1
OUTPUT	1-640250-3	770476-1

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.]

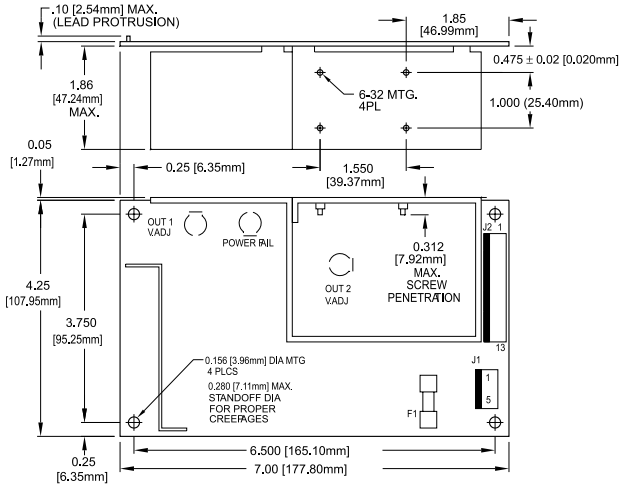
OUTPUT: J2

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

J2	MULTI OUTPUT MODELS	SINGLE OUTPUT MODELS
PIN 1)	OUTPUT #1	OUTPUT #1
PIN 2)	OUTPUT #1	OUTPUT #1
PIN 3)	OUTPUT #1	OUTPUT #1
PIN 4)	COMMON	OUTPUT #1
PIN 5)	COMMON	COMMON
PIN 6)	COMMON	COMMON
PIN 7)	COMMON	COMMON

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

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.

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