

GPC50 Commercial

50 Watt Global Performance Switchers



FEATURES:

- Wide-range ac input 85-264 Vac
- 2-year warranty
- Approved to UL1950, IEC950 and CSA22.2-234 L3
- Exceeds FCC and CISPR22 Class B conducted emissions requirements
- Single and multiple outputs
-  marked to LVD

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: 1.5 A

Hold-Up Time

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

Output Power

50 W continuous, 60 W peak. 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 output 3. Recovery after fault is automatic. See output ratings chart for additional notes or conditions.

Overvoltage Protection

Crowbar provided on V1.

Efficiency

65% at full rated load, nominal input voltage, depending on model and load distribution.

Turn-on Time

Less than 1 second at 120 Vac, 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 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.

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 μ s 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/ μ s. Maximum voltage deviation is 3.5%. Startup/shutdown overshoot less than 3%.

Voltage Adjustment

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

Commercial 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 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.

Leakage Current

0.7 mA 254 Vac @ 60 Hz input.

Safety

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

GPC50 Commercial 50 Watt Multiple Output

Commercial Model	Output No.	Output	Output Minimum	Output Maximum	Output Peak	Noise P-P	Total Regulation (A)	Notes
GPC50A	1	+5 V	0.4 A	5 A	7 A	50 mV	2%	B,C,D
	2	+12 V	0 A	2 A	3 A	120 mV	5%	
	3	-12 V	0 A	0.5 A	1 A	120 mV	3%	
GPC50F	1	+5 V	0.4 A	5 A	7 A	50 mV	2%	D
	2	+12 V	0 A	1.2 A	1.5 A	120 mV	3%	
	3	-12 V	0 A	0.5 A	1 A	120 mV	3%	

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. To maintain these regulation conditions, the 5.1 V current must be at least 1/4 of V2 and not greater than 5 times the V2 current.

C. Requires +5 V to be adjusted within $\pm 1\%$ with at least a 0.4 A load to maintain regulation on this output since its centering voltage tracks the V1 adjustment.

D. Requires +5 V to have at least a 0.4 A load.

GPC50 MECHANICAL SPECIFICATIONS

INPUT J1 MOLEX RC.B. HEADER,
W/CENTER PIN REMOVED,
P/N 26-60-4030

PIN 1) AC LINE
PIN 2) AC NEUTRAL
GND = GROUND (0.250 FASTON TAB)

OUTPUTS J2,J3,J4 MOLEX RC.B. HEADER
P/N 22-05-1042

PIN 1) OUTPUT #3
PIN 2) OUTPUT #2
PIN 3) COMMON
PIN 4) OUTPUT #1

MATING CONNECTORS MOLEX P/N

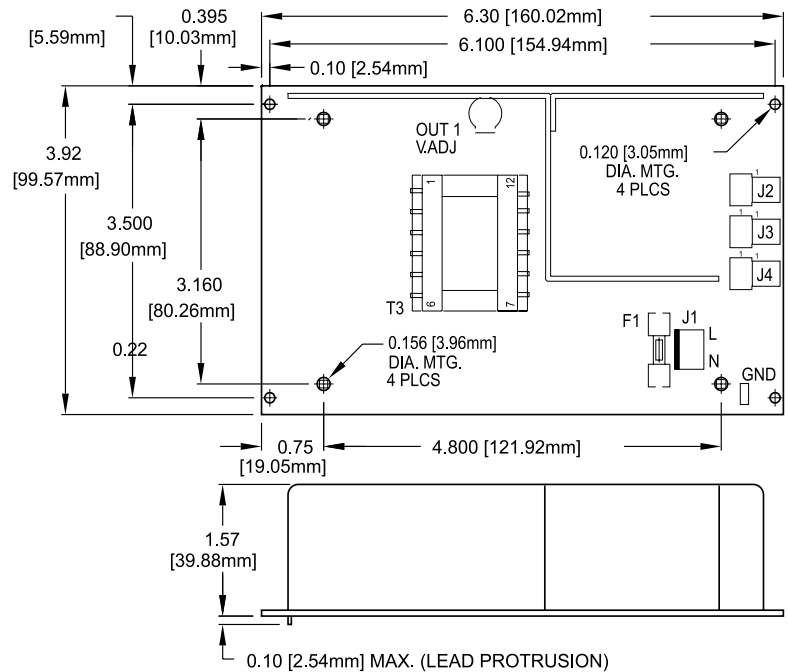
INPUT 09-50-8031 08-50-0189
OUTPUT 22-01-1042 08-50-0114

NOTE: 3A MAXIMUM RECOMMENDED
CURRENT PER CONNECTOR PIN

OPTIONAL ENCLOSURE AVAILABLE,
ORDER P/N 08-30466-1055

WEIGHT: 1.50 LBS MAX.
[0.68 kg 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 _{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. 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.
C. Shock testing—half-sinusoidal, 10 $\pm$ 3 ms duration, $\pm$ direction, 3 orthogonal axes, total 6 shocks.



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