

# GPC50 Commercial

## 50 Watt Global Performance Switchers



### 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.

### 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

#### 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  $\mu$ 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/ $\mu$ 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 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 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

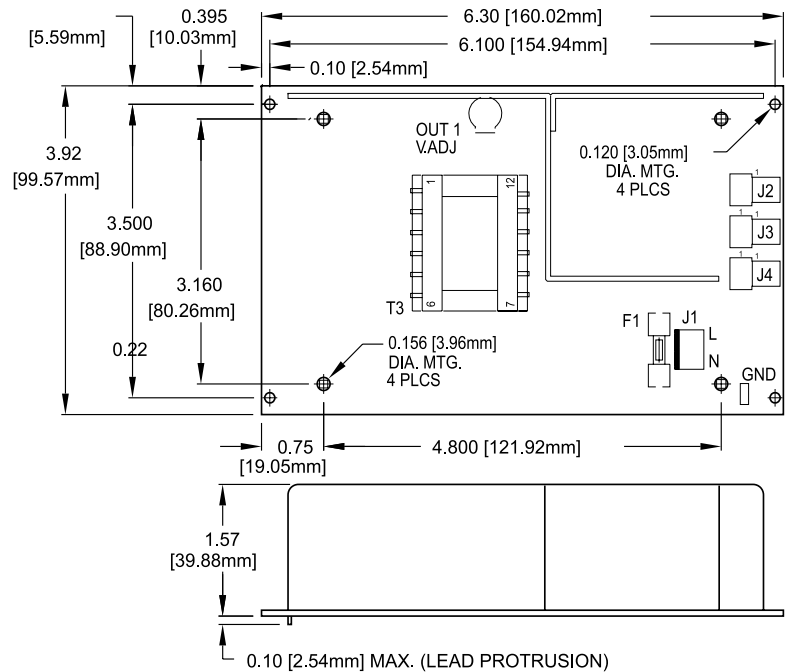
INPUT 09-50-8031 08-50-0189  
 OUTPUT 22-01-1042 08-50-0114

**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 <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

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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