

# **GPC50 Commercial**

# 50 WATT GLOBAL PERFORMANCE SWITCHERS

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# **Summary:**

- Wide-range ac input 85-264 Vac
- 2-year warranty
- Approved to UL1950, IEC950 and CSA22.2-234 L3
- Meets FCC and CISPR22 Class B conducted emissions requirements
- Triple outputs
- RoHS Compliant Model Availabbe (G suffix)
- (€ marked to LVD











CONDOR

#### **SPECIFICATIONS**

Ac Input

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

Maximum input current at 120 Vac, 60 Hz with full rated output load: 1.5 A

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

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 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%.

Voltage Adjustment

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

# **EMI/EMC Compliance**

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

| Conducted Emissions Static Discharge RF Field Susceptibility Fast Transients/Bursts Surge Susceptibility  EN55022 Class B; FCC Class B EN61000-4-2, 6 kV contact, 8 kV air EN61000-4-3, 3 V/meter EN61000-4-3, 2 kV, 5 kH EN61000-4-5, 1 kV diff., 2 kV com. | EMI SPECIFICATIONS  | COMPLIANCE LEVEL   |
|--|---|--|
|  | Static Discharge<br>RF Field Susceptibility<br>Fast Transients/Bursts | EN61000-4-2, 6 kV contact, 8 kV air<br>EN61000-4-3, 3 V/meter<br>EN61000-4-4, 2 kV, 5 kH |

## Leakage Current

0.7 mA 254 Vac @ 60 Hz input.

Approved to UL1950, CSA22.2 No. 234 Level 3, IEC950 and EN60950; UL file #E135803 commercial; CSA #LR46516 all models. All DC outputs are SELV under normal and single fault conditions.



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

- 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 ±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.
- E. Add "G" suffix to part number for RoHS compliant model. Contact factory for availability.

### **GPC50 MECHANICAL SPECIFICATIONS**

INPUT J1 MOLEX P.C.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 PC.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

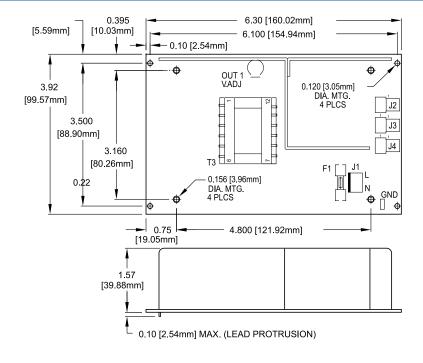
NOTE: 3A MAXIMUM RECOMMENDED CURRENT PER CONNECTOR PIN

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 SPECIFICATIONS | OPERATING                         | NON-OPERATING                   |  |
|------------------------------|-----------------------------------|---------------------------------|--|
| Temperature (A)              | See individual specs.             | -40 to +85°C                    |  |
| Humidity (A)                 | 0 to 95% RH                       | 0 to 95% RH                     |  |
| Shock (C)                    | 20 g <sub>pk</sub>                | 40 g <sub>pk</sub>              |  |
| Altitude                     | -500 to 10,000 ft                 | -500 to 40,000 ft               |  |
| Vibration (B)                | 1.5 g <sub>rms′</sub> 0.003 g²/Hz | 5 g <sub>rms′</sub> 0.026 g²/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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